THOMSON

TV

Brandt FERGUSON SABA TELEFUNKEN THOMSON

PARTS LIST
LISTE PIECES DETACHEES
ERSATZTEILLISTE
LISTA PARTI DI RICAMBIO
LISTA DE PIEZAS DE REPUESTO

Chassis ETC210

MODULES

PSB	**EP210 B*DZ****81**	**R**	**10841220**
KB	**KB210E0001**		**10804460**
MIS	**MIS210E0000**		**10785470**
SSB	**ES210 B5**026000**	**R**	**10822280**

FP520,521	MP100	⚠	10543080
GK101	TSOP1333		25358570
IA001	MSP3410G-QI-C12 FLAT		10801120
IA002	TDA7269		10348790
IA003	MC4558CD FLAT IC		10276220
IB001	TDA6108JF		10616240
IF001	TDA8177F		10352880
IP020	VIPER20/HV(022Y)		10709530
IP030,070	TLP621 GR(D4-LF2 T)	⚠	20827900
IP050,170,190	LM393/NJM2903D		46069900
IP240	TL431ACLP		10724920
IP510	KF80BDT		25486130
IP530	LD1117DT33		25516290
IP551	LD1117DT18		10802820
IR001	ST92R195B/JAM CUT 1.1 FLAT		10663550
IR002	OTP THOMSON ETC210 V1.01		1079942B
IR003	NCP303LSN45T1		10787020
IR004	CY62128BLL-70ZC FLAT		10786980
IR005	M24C16MN6 FLAT		25348520
IU100	VSP9402A-B13 FLAT		10795930
IV200	TDA9330H/N3 FLAT		10795620
IV520,521	LM358D FLAT		25335740
ZL221,251	MP125	⚠	10469180
ZL231	MP40	⚠	10469170
ZP009	MP315	⚠	10575090

IV010	BC847PN	25441670
TA130,**TR**060	BCR141 SMD	16006890
TB001,**TL**311	BF420	11076950
TF041,**TL**312, 803,**TP**034,081, 179,180,210	BC556B	16001020
TG001,003	BF959	25651950
TG006	BD140-16	25425020
TG007	BD139-16	16001760
TG011,**TL**003, 801,**TP**026,080, 160,161,197, 221,**TV**513	BC546B	45001866
TH161,**TR**015, 062,120,**TT**030, 035,080,**TV**300, 310,320,603, **TX**131,134,231, 234	BC846B SMD	16006260
TL004	MPSW01A	70436520
TL005	MPS750	16001340
TL010	2SC5588	25576370
TL029	IRF630FP	25453960
TL807,**TP**051, 150,**TV**277	BC327-40	16000450
TL808,**TP**050, 170	BC337-40	45001466
TP020	SPW17N80C2	25513550
TP520	STD17NF03L	25476200
TP523	BC847BS	25451670
TR061,**TT**050, 060,070,**TV**010, 286,601,602, 606,607,701, 711,721,**TX**133, 233	BC856B SMD	16006310
TR080,086	BSN20	10302150
TV522	DTC113ZK SMD	10550750
TV523	BCR191 SMD	16006910

DA110,**DV**530, 531	LL42 SMD	16012530
DA130,**DP**510, 521,530,551, **DV**286,520,521, 522,523,524, 525,529,533, 534,535,536	LL4148 SMD	16012450
DB004	RGP30MT	10450220
DB006,030,031, 050,051,070, 071,**DL**043,305, 306,**DP**023	BAV21	44044407
DB007	BZX55B47V SMD	25540980
DF011	BZW04-58	10368210
DF031,033, **DL**302,303	RGP10G	10459090
DG001,002,003, 004,**DL**001,073, 805,**DP**030,033, 060,080,081, 160,161,170, 171,178,179, 180,191,193, 197,200,211, 221,222,225, 230	1N4148	44009209
DG026	BZX55C6V8	50890650
DH156	ZMM33 SMD	10376460
DL012,**DP**061, 120,140,150, 220,240	RGP15G	10272800
DL028,222,252	1N4001	16008160
DL029,035	RGP02-20	10472330
DL030	DTV1500MF 1K5V 6.0A	25560440
DL032	STTH8L06FP	25642890
DL034,036	EGP10D	20953640
DL201,**DP**111, 112	MUR1100E	10360280
DL221,251, **DP**007,008	FUF5404	20150190
DL231,**DP**020	FUF4005/MUR160	16009580
DL301	BZX85C24 24V 1.3W	80443620
DP001,002,003, 004,006	GP30M	10455410
DP021	RGP10M	10455320
DP022	BZX85C10	40441560
DP051,113	MUR160 50NOS	25516740

R : RECYCLED PART
: PIECE RECYCLEE
: AUSTAUSCHTEILE
: RICAMBIO RICICLATO
: MODULO REPROCESADO

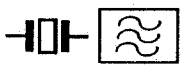
For any requests, please contact THOMSON multimedia after sales service area
Pour toutes précisions, contactez votre service apres vente local THOMSON multimedia
Für weitere Auskünfte, wenden Sie sich bitte an die THOMSON multimedia Kundendienste
Per precisazioni, contattare l'assistenza tecnica THOMSON multimedia
Para cualquier pregunta, por favor contactar con el responsable de zona del servicio postventa de THOMSON multimedia

VERSION 1 05 / 2003
VERSION 2 00 / 0000

35719910

No copying, translation, modification on other use authorized. All rights reserved worldwide. • Tous droits de reproduction, de traduction, d'adaptation et d'exécution réservés pour tous les pays. • Sämtliche Urheberrechte an diesen Texten und Zeichnungen stehen uns zu. Nachdrucke, Vervielfältigungen - auch auszugsweise - nur mit unserer vorherigen Zustimmung zulässig. Alle Rechte vorbehalten. • I diritti di riproduzione, di traduzione, e esecuzione sono riservati per tutti i paesi. • Derechos de reproduccion, de traduccion, de adaptacion y de ejecucion reservados para todos los paises.

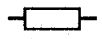
DP053	BZX55B15/ZPD15 2%	80444020
DP110	BYT08PI-1000	25442210
DP130,135	MUR420	16009630
DP520	ZMM10 SMD	16030010
DP524	ZMM5.1 1% SMD	10406250
DV270	ZMM3,9 SMD	16030210
DV271,276, **DX**130,230	BAV203 SMD	10222420
DX101,103,105, 107,140,243	ZMM5.6 2% SMD	10291310
DX123,124	ZMM6,8 SMD	70439940
GE102	LTL307/EE LED	16010330



QA001	18M432HZ	10334670
QR001	4M0HZ	10254300
QU030	20M25HZ	25639490
QV400	12M0HZ SMD	25641210

LA001,050,051, **LH**153,168, **LR**001,079, **LV**200,730	10UH	11066630
LL029	118UH	⚠ 10659760
LL034		⚠ 10679870
LL201,**LP**114	22U0H 10% 1,6A	10470180
LL231	10UH	10260220

PP180	470R0 OHM	10260350



JP500,**JR**013, 015,**JV**333,334, **LA**013,014,023, 024,063,064, 073,074,**RA**019, 090,091,**RR**131, **RU**054	0 OHM 0% 62MI5W	10328750
RA005,015,016, 025,026,035, 036,114,115, **RH**159,**RP**523, 524,525,**RR**050, 066,067,**RT**011, 012,**RV**341,512, 523,526,545, 555,602,**RX**131, 231	1K0 OHM 5% 0,625W	10135770
RA013,014,023, 024,033,034, 061,062,071, 072,**RV**285,342	47K0 OHM 5% 62MI5W	10135220
RA050,164,165, **RT**001,**RV**290	15K0 OHM 5% 0,625W	10135050
RA051,080,120, 121,**RL**015	4R7 OHM 5% 0,35W	10226310
RA092,094, **RH**162	47R0 OHM 5% 62MI5W	10134650
RA112,113,166, 167,**RT**002,004, 005	5K6 OHM +5% 62MI5W	10135960
RA122,**RR**068, **RV**507,529	100K0 OHM 5% 0,625W	10135340
RA133,**RV**343	33K0 OHM 5% 0,625W	10135170
RA134	68K0 OHM 5% 0,625W	10135290
RA168,169, **RP**540,**RR**009, 022,064,069, 122,**RT**033,035, **RV**286,522	10K0 OHM 5% 62MI5W	10135010
RB001,004	1K5 OHM 5% 0,50W	10121880
RB002	560K0 OHM 5% 0,250W	15008660
RB011,**RK**105, 107,**RL**001	1K0 OHM 5% 0,25W	15006730
RB031,051,071	560R0 OHM 10% 0,50W	10257590
RB032,052,072	100R0 OHM 5% 0,25W	30943330
RB079	47R0 OHM 20% 0,50W	21019800
RF002,040, **RG**019,023, **RL**107,803, **RP**010,024,033, 035,073,151, 152,160,165, 187,189,194, 230	1K0 OHM 5% 0,140W	15006720
RF003,006	1K3 OHM 1% 0,40W	15012810
RF008	1R5 OHM 1% 0,70W	10451140
RF011,012	1R21 OHM 1% 0,70W	13010820
RF021	0R0 OHM 0% 0,25W	10113540
RG026,027	3K3 OHM 5% 3W	30941170
RG030,**RL**808, 809	22R0 OHM 5% 0,25W	⚠ 35031220
RK101,103	453R0 OHM 1% 0,250W	15018140
RK101	5K62 OHM 1% 0,25W	15019670
RK102,105	681R0 OHM 1% 0,25W	15020310
RK102,103	1K5 OHM 1% 0,25W	80437630
RK104	3K32 OHM 1% 0,25W	15017270
RL003,805, **RP**032,054,065, 137,150,153, 171,192,221, 224	100R0 OHM 5% 0,14W	15006090
RL005,**RP**066, 067,069,074, 075,080,130, 135,162,175, 198,202,212, 213,223,241	10K0 OHM 5% 0,14W	15006120
RL021,025	1R82 OHM 1% 0,70W	10451420
RL022,**RP**243	1K0 OHM 1% 0,25W	15012570
RL023	3M9 OHM 2% 0,40W	13057750
RL024	100K0 OHM 1% 0,25W	15010160
RL026,300,801, **RP**030,034,055, 062,070,076, 078,172,178, 181,204,210	4K7 OHM 5% 0,14W	13063470
RL037	330R0 OHM 10% 0,50W	14050190
RL044	280K0 OHM 1% 0,25W	15015150
RL221,251	0R27 OHM 5% 2,50W	10263600
RL231	4R7 OHM 5% 3,0W	20709130
RL303	33K2 OHM 1% 0,25W	15016530
RL308	18K7 OHM 1% 0,25W	15012340
RL310	46K4 OHM 1% 0,70W	10403710
RL311	2K21 OHM 1% 0,25W	15015480
RL312	RES 10K OHM 5% .25W CARBON FILM	15006130
RL314,**RP**026, 200	47K 5% 0.140W	15008400
RL802	8K2 OHM 5% 0,14W	15009410
RL807	330R0 OHM 5% 0,25W	15007800
RL811	220R0 OHM +5% 0,70W	13059900
RP004	10R0 OHM 5,1W	10541850
RP015,016	9R0 OHM 230V PTC	⚠ 10540280
RP019	470K0 OHM 5% 0,43W	13005930
RP020	100R0 OHM 5% 0,75W	⚠ 10230030
RP027	3K9 OHM 5% 0,14W	15008110
RP049	33R0 OHM 5% 2W	50888890
RP050	10M0 OHM 5% 1W	⚠ 21090250
RP051	100R0 OHM 5% 4,50W	10379830
RP052	0R1 OHM 5% 2,50W	⚠ 10288160
RP112	10K0 OHM 10% 2W	15022700
RP183	39K0 OHM 1% 0,25W	13064120
RP184	4K75 OHM 1% 0,25W	41344301
RP242	1K07 OHM 1% 0,25W	15012640
RP401	1M0 OHM 5% 1W	⚠ 10769880
RP402	ERZV14D511	⚠ 20648220
RP551	6R8 OHM 5% 2W	90576570
RP554,**RT**013, 014,015,**RV**607	330R0 OHM 5% 62MI5W	10134870
RP900	28K7 OHM 1% 0,25W	15015250
RR019	2K7 OHM 5% 0.625W	10135880
RR025	270R0 OHM 5% 0,625W	10134850
RR062,**RV**277, 511,513,542	2K2 OHM 5% 0,625W	10135860
RR072,075, **RV**011,021,041	220R0 OHM 5% 0,625W	10134830
RV302,312,322	10R0 OHM 5% 0.625W	10134410

CA004,008, **CR**008,011,017, 018,020,052, 053,054,066, 070,071,076, 115,126,**CT**053, 063,073,**CV**005	100P0F 5% 50V	20506590
CA009,**CP**561, 562,563,565, 569,570,571, **CR**019,**CU**048	10NF 10% 50V	10138960
CA051,054,082, 083,084,102, **CU**705,709, **CV**270,701	10U0F 20% 16V 85C SMD	10150190
CA052,058,110, 111,123,132, 160,161,**CH**150, 157,159,**CR**060, 088,112,116, **CT**030,035, **CV**505,511,527, 528,530,532, 534	1N0F 10% 50V	10138550
CA053,056,085, 100,103,**CP**524, **CR**078,079,087, **CT**081,**CU**037, 042,701,702, 703,704,706, 707,708,**CV**010, 201,202,203, 220,221,222, 260,261,262, 290,521,620, 621,622,623, 624,625,702, 703,704,705, 706,707,708, 709,710,731, **CX**132,232,251, 256	100P0F 10% 16V	20947390

CA063,064,073, 074,116,117	22U0F 20% 16V 85C SMD		25408540
CA118,119, **CG**002,004, **CL**010,303,810, **CP**026,063	100N0F 5% 63V		25441310
CB001	10N0F 3K0V		14036450
CB004,**CL**043	100N0F 20% 250V		13072860
CB079	100P0F 20% 2K0V		14006310
CF003	4N7F +10% 100.0V		70427740
CF020,**CP**031, 034,172,180, 182,197,204	100N0F 10% 100V		20467110
CF031,032, **CL**008,**CP**024, 511,521	220N0F 20% 63V		13076260
CG007,009,012	22NF 20% 250V		10259550
CK101,**CP**152, 195,201,221	10N0F 10% 100V		70427750
CL029	3U3F 20% 63V	⚠	10348260
CL031	11N6F 2,5% 2K0V	⚠	40406501
CL032	27N0F 5% 630V	⚠	10679680
CL034	12N0F 2% 400V		10672180
CL035	330N0F 5% 630V	⚠	10711510
CL036	2U2F 20% 250V		10190240
CL038,039	27N0F 5% 250V		10683250
CL130,131	2N0F 2.5% 1K6V	⚠	10832010
CL201,221,231, 251	330P0F 20% 1K0V		14035270
CL301	10N0F 5% 400V		10588870
CL806	47U0F 20% 50V		80429460
CP003,004,005	4N7F 1K0V		10058740
CP006	1U0F 10% 400V	⚠	15400480
CP007	560N0F 5% 250V	⚠	10376360
CP008,009,051, 121,131,136, 141,151	470P0F 10% 2K0V		10099390
CP010	390U0F 20% 450V		25527780
CP011	1N5F 10% 1K0V		20338740
CP012,022,061, 113	220P0F 10% 1K0V		25460410
CP015	68N0F 20% 250V		10256210
CP019,020	100P0F 20% 1K0V		14035280
CP021	1N0F 5% 400V		13055520
CP027	22N0F +10% 63.0V		13078160
CP030	2N2F 10% 100V		80434130
CP049,050	1N0F 20% 400V	⚠	10442650
CP052	2N2F 10% 1K0V		13090980
CP110	100U0F 50% 200V		10516590
CP111	470P0F 10% 2K0V		25392030
CP112	1N0F 10% 1K6V		10539060
CP190,199,250	47U0F 20% 25V		13070520
CP230	220N0F 20% 16V		30935550
CP241	47NF 10% 63V		13076040
CP401	470N0F 20% 275V	⚠	10596570
CR003,004,200, 201,202,203, **CV**022,042	39P0F 5% 50V		20719460
CT011,014, **CV**542,554,556	4.7NF 10% 50V		10136710
CU030,031	15P0F 5% 50V		20678050
CV200,730	100U0F 20% 16V 85C SMD		25408580
CV279,300,310, 320,400,401	10P0F +0P5F -0P5F 50V		20548230

LF022,**LG**001	60U0H		25504350
LL001			10778220
LL008	1372.0103	⚠	10825850
LL037	5U5H	⚠	10718430
LL200	16U5H		10564380
LP008	570U0H	⚠	10710110
LP020	STAND-BY	⚠	10786640
LP050	SMT57LZ 10805510	⚠	10805510
LP051	560N0H 20%		25490400
LP070	TF-M	⚠	10712120
LP401	TF-MF 16MI0H	⚠	10708570
LP402		⚠	1533285B
LU010,701,702	10U0H 10% SMD		25440830

OTHER PARTS
AUTRES PIECES
SONSTIGE TEILE
ALTRE PARTI
OTRAS PIEZAS

BA005	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	11095570
BA009,**BG**003	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	90581940
BA010,**BP**130	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	70438840
BA012	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	30959990
BB001,**BV**300	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	80448080
BB010	CATHODE RAY TUBE SOCKET SUPPORT TUBE CATHODIQUE BILDROEHRENFASSUNG SUPPORTO TUBO CATODICO SOPORTE T.R.C	⚠ 80298800
BJ010	CINCH SOCKET PRISE CINCH CINCH-BUCHSE PRESA CINCH TOMA CINCH	25669200
BJ011	SVHS SOCKET PRISE SVHS S-VHS-BUCHSE PRESA SVHS TOMA SVHS	20392900
BL111,**BP**005, 500,**BV**001	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	25411960
BL111,**BP**005	CABLE 21X 100MM CABLE NAPPE 21X 100MM FOLIENKABEL 21X 100MM CAVO DI COLLEGAMENTO 21X 100MM CABLE 21X 100MM	25471490

BQ012	JACK SOCKET PRISE JACK BUCHSE PRESA JACK TOMA JACK	10539510
BR001	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	20459464
BX004	CONNECTOR CONNECTEUR STECKVERBINDUNG CONNETTORE CONECTOR	20487680
BX100,200	SCART SOCKET PRISE PERITEL EURO-AV-BUCHSE EUROPRESA NORMALIZZATA EUROCONECTOR	25421870
CH200	ON/OFF SWITCH MSB2000 CONTACTEUR MARCHE/ARRET MSB2000 EIN-AUS SCHALTER MSB2000 CONTATTORE ACCESO/ SPENTO MSB2000 CONTACTOR MARCHA/PARADA MSB2000	⚠ 10276500
CJ015	CABLE WITH CONNECTOR 9 PINS 380MM CABLE AVEC CONNECTEUR 9 VOIES 380MM KABEL MIT VERBINDER 9 PINS 380MM CAVO CON CONNETTORE 9 SPINOTTI 380MM CABLE CON CONECTOR 9 PUNTOS 380MM	10512510
CJ016	CABLE WITH CONNECTOR 3 PINS 180MM CABLE AVEC CONNECTEUR 3 VOIES 180MM KABEL MIT VERBINDER 3 PINS 180MM CABLE CON CONNETTORE 3 SPINOTTI 180MM CABLE CON CONECTOR 3 PUNTOS 180MM	25544820
CJ020	CABLE WITH CONNECTOR 10 PINS 380MM CABLE AVEC CONNECTEUR 10 VOIES 380MM KABEL MIT VERBINDER 10 PINS 380MM CAVO CON CONNETTORE 10 SPINOTTI 380MM CABLE CON CONECTOR 10 PUNTOS 380MM	25434810
CJ030	CABLE WITH CONNECTOR 6 PINS 500MM CABLE AVEC CONNECTEUR 6 VOIES 500MM KABEL MIT VERBINDER 6 PINS 500MM CAVO CON CONNETTORE 6 SPINOTTI 500MM CABLE CON CONECTOR 6 PUNTOS 500MM	25460570
CJ035	CABLE WITH CONNECTOR 3 PINS 580MM CABLE AVEC CONNECTEUR 3 VOIES 580MM KABEL MIT VERBINDER 3 PINS 580MM CAVO CON CONNETTORE 3 SPINOTTI 580MM CABLE CON CONECTOR 3 PUNTOS 580MM	30020170

CJ050	CABLE WITH CONNECTOR 7 PINS 500MM WHITE CABLE AVEC CONNECTEUR 7 VOIES 500MM BLANC KABEL MIT VERBINDER 7 PINS 500MM WEIB CAVO CON CONNETTORE 7 SPINOTTI 500MM BIANCO CABLE CON CONECTOR 7 PUNTOS 500MM BLANCO	25018710
CJ100	THT CABLE CABLE THT KABEL THT CAVO THT CABLE THT	⚠ 10664300
CJ130	CABLE WITH CONNECTOR 6 PINS 740MM RED CABLE AVEC CONNECTEUR 6 VOIES 740MM ROUGE KABEL MIT VERBINDER 6 PINS 740MM ROT CAVO CON CONNETTORE 6 SPINOTTI 740MM ROSSO CABLE CON CONECTOR 6 PUNTOS 740MM ROJO	25485670
FP001	2A5T 250V TIME-LAG FUSE 2A5T 250V FUSIBLE TEMPORISE 2A5T 250V SICHERUNG 2A5T 250V FUSIBILE TEMPORIZZATO 2A5T 250V FUSIBLE TEMPORIZADO	⚠ 10246750
FP401	3A15T 250V TIME-LAG FUSE 3A15T 250V FUSIBLE TEMPORISE 3A15T 250V SICHERUNG 3A15T 250V FUSIBILE TEMPORIZZATO 3A15T 250V FUSIBLE TEMPORIZADO	⚠ 10119590
NH001	FE6230 TUNER FE6230 TETE FE6230 TUNER FE6230 TUNER FE6230 SINTONIZADOR	21254210
SK101,102,103,104,105	MICROSWITCH MICRO CONTACTEUR MIKROSCHALTER MICROINTERRUTTORE MICROCONTACTOR	30011100

EQUIPMENT/PRESENTATION
EQUIPEMENT/PRESENTATION
AUSSTATTUNG/GEHAEUSE
PARTI VARIE
EQUIPO/PRESENTACION

FRONT PANEL SI01TH FACADE SI01TH FRONTPLATTE SI01TH PANNELLO FRONTALE SI01TH PANEL FRONTAL SI01TH	25684350
REAR PANEL RGY49TH DOS RGY49TH RUECKWAND RGY49TH PANNELLO POSTERIORE RGY49TH TAPA POSTERIOR RGY49TH	⚠ 25668810
COVER SCREW UPPER RIGHT RGY49TH CACHE VIS SUPERIEUR DROIT RGY49TH ABDECKUNG SCHRAUDE OBEN RECHTS RGY49TH COPERCHIO TORNILLO SUPERIORE DERECHO RGY49TH CUBIERTA VITE SUPERIOR DESTRO RGY49TH	25673810
COVER SCREW UPPER LEFT RGY49TH CACHE VIS SUPERIEUR GAUCHE RGY49TH ABDECKUNG SCHRAUDE OBEN LINKE RGY49TH COPERCHIO TORNILLO SUPERIORE IZQUIERDO RGY49TH CUBIERTA VITE SUPERIOR SINISTRO RGY49TH	25673820
JACK PANEL RGY49TH TABLEAU DE PRISES RGY49TH JACK FRONTPLATTE RGY49TH QUADRO DI PRESA JACK RGY49TH QUADRO DI PRESA JACK RGY49TH	⚠ 25676120
COVER CONTROL PANEL 5+100HZ HOTSTAMPING CACHE TABLEAU DE COMMANDES HOTSTAMPING ABDRCKUNG BEDIENTEIL 5+100HZ HOTSTAMPING COPERCHIO QUADRO DI COMANDO 5+100HZ HOTSTAMPING CUBIERTA TABLERO DE MANDO 5+100HZ HOTSTAMPING	25697240
CHASSIS SLIDE SECURING GLISSIERE FIXATION CHASSIS SCHIEBER BEFESTIGUNG CHASSIS SVIVOLO DI FISSAGGIO CHASSIS CORREDERA DE SUJECION CHASIS	25413960
FCB SUPPORT GY20TH SUPPORT FCB GY20TH FCB HALTER GY20TH SUPPORTO FCB GY20TH SOPORTE FCB GY20TH	25668550
COVER FCB RGY49TH CACHE FCB RGY49TH ABDRCKUNG FCB RGY49TH COPERCHIO FCB RGY49TH CUBIERTA FCB RGY49TH	25668300
LOUDSPEAKER BOX ASSY GY20TH ENCEINTE ACOUSTIQUE COMPLETE GY20TH LAUTSPRECHERBOX KPL GY20TH CASSA ACUSTICA COMPLETA GY20TH CAJA ACUSTICA EQUIPADA GY20TH	25670090
ON/OFF SWITCH SUPPORT SUPPORT CONTACTEUR MARCHE/ARRET HALTER EIN-AUS SCHALTER SUPPORTO CONTATTORE ACCESO/SPENTO SOPORTO CONTACTOR MARCHA/PARADA	25668860
ON/OFF BUTTON CH10TH TOUCHE MARCHE/ARRET CH10TH EIN-AUS TASTE CH10TH TASTO ACCESO/SPENTO CH10TH TECLA MARCHA/PARADA CH10TH	25679310
BUTTON ASSY 5T CH10TH ENSEMBLE DE TOUCHES 5T CH10TH TASTENEINHEIT 5T CH10TH ASSIEME TASTI 5T CH10TH CONJUNTO DE TECLAS 5T CH10TH	25698670
POWER SUPPLY LEAD CORDON D'ALIMENTATION NETZKABEL CAVO DI ALIMENTAZIONE CABLE DE ALIMENTACION	⚠ 10260880
CORD STOPPER ATTACHE CORDON SECTEUR ZUGENTLASTUNG BRIDA CORDONE DI ALIMENTAZIONE SUJECION CABLE DE ALIMENTACION	25307670
CABLE 460MM 20KV HT STRIPPED CABLE 460MM 20KV HT STRIPPED KABEL 460MM 20KV HT STRIPPED CAVO 460MM 20KV HT STRIPPED CABLE 460MM 20KV HT STRIPPED	⚠ 10369650
W66ELC011X121 CATHODE RAY TUBE W66ELC011X121 TUBE CATHODIQUE W66ELC011X121 FARBBILDROEHRE W66ELC011X121 TUBO CATODICO W66ELC011X121 T.R.C	⚠ 10808960
DEGAUSSING COIL 1077MM BOBINE DE DEMAGNETISATION 1077MM ENTMAGNETISIERUNGSSPULE 1077MM BOBINA DI SMAGNETIZZAZIONE 1077MM BOBINA DE DESIMANTACION 1077MM	⚠ 10807850
EFC COIL BOBINE EFC EFC-SPULE BOBINA EFC BOBINA EFC	⚠ 10542150
RCT311TAM1 REMOTE CONTROL RCT311TAM1 TELECOMMANDE RCT311TAM1 FERNBEDIENUNG RCT311TAM1 TELECOMANDO RCT311TAM1 TELEMANDO	21282900
FOLDING BOX EMBALLAGE CARTON KARTON IMBALLAGGIO CARTONE EMBALAJE CARTON	25648960
FITTING DOWNER CALE INFERIEURE POLSTER UNTEN DISTANZIATORE INFERIORE CALZO INFERIOR	25648940
FITTING UPPER CALE SUPERIEURE POLSTER OBEN DISTANZIATORE SUPERIORE CALZO SUPERIOR	25648930

MAINTENANCE TOOLS
MAINTENANCE
WERKZEUG FUER DAS GERAET
UTENSILI DI MANUTENZIONE
MANTENIMIENTO

ETC210 POWER SUPPLY REPAIR KIT ETC210 KIT DE MAINTENANCE ALIMENTATION ETC210 REPARATURSET NETZTEIL TV ETC210 KIT PER RIPARARE L'ALIMENTAZIONE ETC210 KIT DE REPARACION DE ALIMENTACION	35722830

32WH402S PARTS LIST 32WH402S LISTE DE PIECES DETACHEES 32WH402S ERSATZTEILLISTE 32WH402S LISTA PARTI DI RICAMBIO 32WH402S LISTE DE PIEZAS DE REPUESTO	35719300
ETC210 SERVICE MANUAL ETC210 DOC TECHNIQUE ETC210 TECHNISCHE DOKUMENTATION ETC210 DOCUMENTAZIONE TECNICA ETC210 DOCUMENTACION TECNICA	35719290
ETC210 UM 15 LANGUAGE ETC210 NU 15 LANGUES ETC210 BA 15 SPRACHE ETC210 IU 15 LINGUA ETC210 IU 15 LENGUA	25678300

The description and characteristics given here are of informative significance only, and non committal. To keep up the high quality of our products, we reserve the right to make any changes or improvement without previous notice. • Les descriptions et caractéristiques figurant sur ce document sont données à titre d'information et non d'engagement. En effet, soucieux de la qualité de nos produits, nous nous réservons le droit d'effectuer, sans préavis, toute modification ou amélioration. • Die Beschreibungen und Daten in dieser Anleitung dienen nur zur Information und sind nicht bindend. Um die Qualität unserer Produkte ständig zu verbessern, behalten wir uns das Recht auf Änderungen vor. • Le descrizioni e le caratteristiche date su questo documento sono fornite a semplice titolo informativo e senza impegno. Ci riserviamo il diritto di eseguire, senza preavviso, qualsiasi modifica o miglioramento. • Las descripciones y características que figuran en este documento se dan a título de información y no de compromiso. En efecto, en bien de la calidad de nuestros productos, nos reservamos el derecho de efectuar, sin previo aviso, cualquier modificación o mejora.

THOMSON multimedia Sales Europe - S.A. au capital de 30 000 000 € - Siège : 46, Quai Alphonse Le Gallo 92100 Boulogne FRANCE - RCS NANTERRE B 322 019 484

INFORMATION - INFORMATIONS - INFORMATIONEN - INFORMAZIONE - INFORMACIONES

(EN) **OUT OF PRODUCTION MODE :**
To set TV into "**out of production mode**" (letter **P** at the screen):
- Press the **VOL -** button on the TV keyboard until the letter "P" disappears.

(FR) **SORTIE DE MODE PRODUCTION**
Pour sortir le téléviseur du mode production (lettre P à l'écran):
- Appuyer sur la touche **VOL-** du clavier du téléviseur jusqu'a la disparition de la lettre **"P"** .

(DE) **VERLASSEN DES PRODUKTIONSMODE:**
"Lautstärke -" am Nahbedienfeld drücken bis der Cursor am linken Anschlag ist und dann noch weitere ca. 10 s halten bis das eingeblendete **"P"** verschwindet.

(IT) **USCITA DA PRODUCTION MODE:**
Per uscire dalla condizione " **Production mode**" (lettera P presente suulo schermo)
- Premere il tasto-volume sulla tastiera comandi del TV fino a che la lettera **"P"** scompare.

(ES) **SALIDA DEL MODO PRODUCCION.**
Para salir del '**modo producción**', (aparece una letra **P** en la pantalla):
- Mantener pulsada la tecla "**Volumen -**" del teclado hasta que la letra **"P"** desaparezca.

MEASUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER :
Bar test pattern : PAL, I standard, 100% white.

- On UHF, input level 1 mV
- Via the scart socket, input level 1 Vpp

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected : PR 01.
DC voltages measured between the point and earth using a digital voltmeter.

RECEPTEUR :
Mire de barres : SECAM, Norm L, Blanc 100%.

- En UHF, niveau d'entrée 1 mV
- Par la prise Péritélévision, niveau d'entrée 1Vcc.

Couleur, contraste, lumière à mi-course, son minimum.
Programme affecté PR 01.
Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER :
Farbbalken : PAL, Norm G, Weiss 100%

- Bei UHF Eingangspegel 1 mV.
- Über die Scartbuchse : Eingangspegel 1 Vss.

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR 01.
Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE :
Monoscopio per barre : PAL, norma G. bianco 100%.

- In UHF, livello d'entrata 1 mV,
- Per la presa SCART, livello d'entrata 1 Vcc.

Colore, Contrasto, Luce a metä corsa, Suono minimo.
Programma designato PR 01.
Tensioni continue rilevate rispetto alla massa con un voltametro numerico.

RECEPTOR :
Mira de barras : PAL, norma G, blanco 100%.

- En UHF, nivel de entrada 1 mV,
- Por la toma Peritelevision, nivel de entrada 1 Vpp.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR 01.
Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.

SERVICE MODE (EN) — MODE SERVICE (FR) — SERVICE - MODE (DE) — SERVICE - MODE (IT) — MODO SERVICIO (ES)

1 - ENTER/EXIT SERVICE MODE - ENTREE/SORTIE DU MODE SERVICE - EIN-AUSTIEG SERVICE MODE - ACCESSO/USCITA ALLA/DALLA FUNZIONE - ENTRADA/SALIDA MODO SERVICIO

1 ACCESSING SERVICE MODE

TV Control Panel Access

- Switch the TV into **"Standby" mode by pressing the Standby button on the RCU.**
  Wait till the TV goes into the standby.
- Press the **VOL-** button and then the **PR-** button on the TV keyboard.
  Hold them down for more than 8 seconds.
- After the normal switch on time, when the 8 seconds have elapsed, the main service menu appears on the screen.

```
Soft-Ver.   V1.00-5
Config.     W5Z---V     AB7F
Serial-No.  AHN456789

I> QUIT
   TUBE
   SETUP
   GEOMETRY
   VIDEO
   IF
   SOUND SETTINGS
   ERROR CODES
   CONVERGENCE
```

Note :
In service mode :
- The child lock function is re-initialized
- Clear any wake-up/sleep timers
- Pin 8 of the scart plug has to be ignored.
- AV- Link WSS detection and letterbox detection (autoformat) have to be disabled.
- Automatic standby functions, in case of no antenna signal have to be disabled.
- Adjust sharpness to middle (nominal)
- Installation Mode disabled.
- Default format and zoom.

1 ACCES AU MODE SERVICE

Accès avec le clavier du téléviseur

- **Mettre le téléviseur en position "veille" avec la télécommande utilisateur.**
- **Appuyer sur la touche VOL- puis sur la touche PR- du clavier du téléviseur.**
  Maintenir enfoncées ces touches ensemble plus de 8 secondes.
- Après le temps normal de mise en fonctionnement et lorsque les 8 secondes sont écoulées, le menu principal du Mode Service apparaît.

```
Soft-Ver.   V1.00-5
Config.     W5Z---V     AB7F
Serial-No.  AHN456789

I> QUIT
   TUBE
   SETUP
   GEOMETRY
   VIDEO
   IF
   SOUND SETTINGS
   ERROR CODES
   CONVERGENCE
```

Note :
En mode service:
- Le verrouillage parental est effacé (réinitialisé).
- La programmation des heures "reveil/matin" est annulée.
- Pin 8 de la prise SCART ignorée.
- AV- Link , la détection WSS et la détection letterbox ne sont pas validées.
- La fonction de veille automatique en cas d'absence de signal d'antenne n'est pas validée.
- Contour en valeur médiane (nominale)
- Le mode d'installation n'est pas pas valide.
- Zoom et format ignorés.

1 EINSTIEG IN DEN SERVICE MODE

Zugriff über die Tastatur des Fernsehgeräts

- Schalten Sie das Gerät mit der Fernbedienung in **Standby**.
- Drücken Sie die **VOL-** Taste und dann die **PR-**Taste am Nahbedienteil
  des Gerätes. Halten Sie beide Tasten für länger als 8 Sekunden gedrückt.
- Nach der normalen Einschaltzeit erscheint auf dem Bildschirm das Menü des Service-Modes.

```
Soft-Ver.   V1.00-5
Config.     W5Z---V     AB7F
Serial-No.  AHN456789

I> QUIT
   TUBE
   SETUP
   GEOMETRY
   VIDEO
   IF
   SOUND SETTINGS
   ERROR CODES
   CONVERGENCE
```

Anmerkung:
Im SERVICE MODE :
- wird die Kindersicherung gelöscht.
- werden alle Weck-, Schlummer-Timer gelöscht.
- wird die SCART - Schaltspannung nicht ausgewertet.
- AV-Link, WSS- und Letterbox-Detektion (Autoformat) sind abgeschaltet.
- wird die Automatische Abschaltung bei fehlendem Antennensignal gesperrt.
- Stellen Sie den Schärferegler in Mittelstellung.
- wird der Installations-Modus gesperrt.
- wird das Standardformat bzw. der Standard-Zoom-modus gewählt.

1 ACCESSO AL SERVICE MODE

tramite i comandi del televisore

- Posizionare il TV nel modo **"Standby"** usando il tasto standby del telecomando.Attendere che il TV si posizioni in standby.
- Premere prima il tasto **VOL-** e poi il tasto **PR-** sulla tastiera del TV Mantenere premuto idue tasti per più di 8 secondi.
- Dopo circa 8 secondi il TV si accenderà mostrando sullo schermo il menu service.

```
Soft-Ver.   V1.00-5
Config.     W5Z---V     AB7F
Serial-No.  AHN456789

I> QUIT
   TUBE
   SETUP
   GEOMETRY
   VIDEO
   IF
   SOUND SETTINGS
   ERROR CODES
   CONVERGENCE
```

Nota :
Nel service mode:
- La funzione Blocco Bambini è reinizializzata.
- Cancella qualsiasi wake-up/sleep timers.
- Il piedino 8 della scart è ignorato.
- La rilevazione AV-Link WSS e rilevazione letterbox (formato) è stata disabilitata.
- Funzione automatica di standby, nel caso di mancanza del segnale d'antenna è disabilitata.
- Forzare Sharpness al centro (nominale)
- Il Modo Install disabilitato.
- Formato ignorati e zoom.

1 ACCESO AL MODO SERVICIO

Acceso panel control TV

- Con el TV encendido, apagarlo con la tecla **"Standby"** del telemando. Asegurarse de que el aparato ha pasado a "Standby".
- Pulsar primero, la tecla **VOL-** y después **PR-** del teclado del TV. Mantenerlas pulsadas al mismo tiempo durante unos 8 segundos
- Después del arranque normal, cuando hayan pasado los 8 segundos, aparecerá el menú principal del Modo Servicio

```
Soft-Ver.   V1.00-5
Config.     W5Z---V     AB7F
Serial-No.  AHN456789

I> QUIT
   TUBE
   SETUP
   GEOMETRY
   VIDEO
   IF
   SOUND SETTINGS
   ERROR CODES
   CONVERGENCE
```

Nota :
En modo servicio:
- La función "Bloqueo niños" es reinicializada.
- Borrar despertador/función sleep
- La patilla 8 del SCART es ignorada
- La detección de AV- Link, WSS y "modo buzón" (autoformato) se desactiva.
- El apagado automático en caso de ausencia de señal de antena es desactivado.
- Situar la NITIDEZ en el punto medio (nominal)
- El Modo Instalación es desactivado.
- Zoom y formato ignorados.

2 TEMPORARY EXIT FROM SERVICE MODE

- Press Exit on the Remote control.
- Everyday use menu can be accessed via Menu button. (Text and EPG not available)

- Field Service Menu can be re-entrered via Blue button.

2 SORTIE TEMPORAIRE DU MODE SERVICE

- Utiliser la touche Exit de la télécommande.
- Le menu utilisateur peut être accessible via la touche "Menu". (Télétexte et EPG non valides).

- Pour entrer à nouveau dans le mode service utiliser la touche bleue.

2 VORÜBERGEHENDES VERLASSEN DES SERVICE MODE

- Auf der Fernbedienung EXIT drücken
- Mit der Taste MENÜ gelangen Sie zum Menü ÜBERSICHT (Videotext und EPG sind nicht verfügbar)

- Mit der blauen Taste gelangen Sie zurück in den Service-Mode.

2 USCITA TEMPORANEA DAL SERVICE MODE

- Premere Exit sul telecomando.
- Al menu di uso quotidiano si accede attraverso il pulsante Menu. (Text and EPG disabilitati).

- É possibile rientrate nel Menu Service tramite il pulsante Blue.

2 SALIDA TEMPORAL DEL MODO SERVICIO

- Pulse Salir en el mando a distancia
- Con el botón Menu puede acceder al menú de uso cotidiano. (Teletexto y EPG no disponibles).

- Puede entrar al Menú Servicio con el botón azul.

3 EXITING FROM SERVICE MODE

Remote Control — **TV control panel** — **on/off key or Stand-by**

- Go to the point QUIT in the Field service Mode main menu.
- Press ">" button
- Press "VOL.+" button
- TV mode.
- Stand-by function or "off" with on/off key.

Values or adjustments are no stored before exiting from service mode will not be written into the NVM

3 SORTIE DEFINITIVE DU MODE SERVICE

télécommande — **clavier du téléviseur** — **Inter M/A ou Stand-by**

- Aller au point "QUIT" dans le menu principal du mode service.
- Appuyer sur ">"
- Appuyer sur "VOL+"
- Mode TV.
- Foncion Stand-by ou "off" par M/A

Les valeurs ou réglages non mémorisés avant la sortie ne seront pas écrites en NVM.

3 ENDGÜLTIGES VERLASSEN DES SERVICE MODES

Fernbedienung — **TV-Bedienfeld** — **Netzschalter oder Standby**

- Gehen Sie im Hauptmenü des Service-Modes mit dem Cursor auf die Zeile QUIT.
- Taste ">"drücken
- Taste "VOL+" drücken
- TV Modus
- Mit Standby-Funktion oder Netzschalter ausschalten

Werte und Einstellungen, die nicht vor dem Verlassen des Service-Modes gespeichert wurden, werden nicht in den Permanentspeicher (EEPROM) übernommen.

3 USCIRE DAL SERVICE MODE

telecomando — **Panello controllo TV** — **Tasto on/off**

- Andare al punto QUIT nel Modo service del Menu principale
- Premere ">"
- Premere "VOL.+"
- Modo TV.
- Funzione Stand-by o "off" con il tasto on/off

Valori e regolazioni non memorizzati prima di uscire dal Modo service e non vengono scritti nell'NVM

3 SALIDA DEL MODO SERVICIO

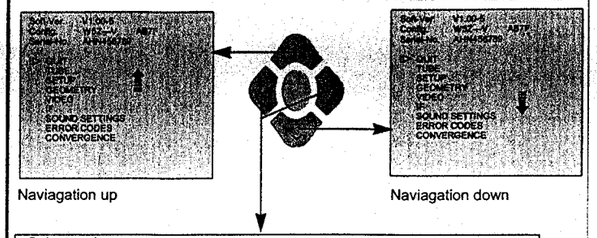
telecomando — **Panel de control TV** — **Tecla on/off de**

- Vaya al punto QUIT del menú principal de modo Servicio
- Pulse ">"
- Pulse "VOL.+"
- Modo TV.
- -Stand-by o desconexión (off) con tecla on/off.

Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en el NVM

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE SUCHE IN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



Naviagation up — Naviagation down

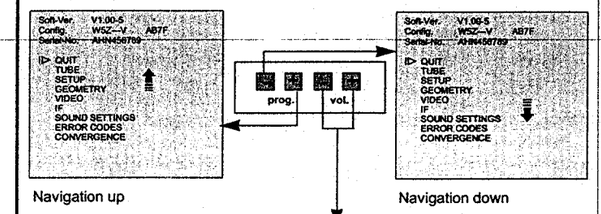
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

> VALUE

< VALUE

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE



Navigation up — Navigation down

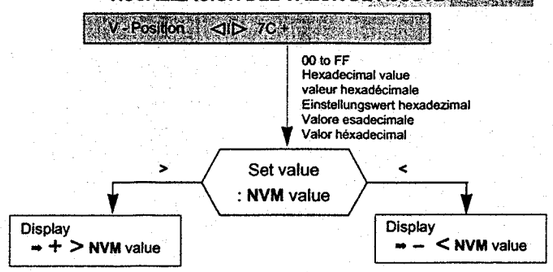
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE

Vol. - → VALUE

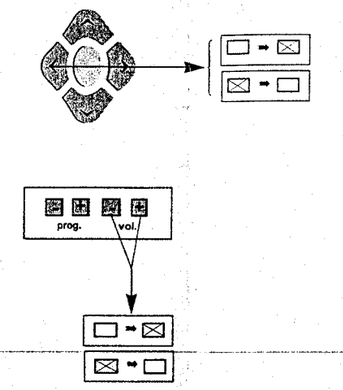
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELLUNGSWERTES VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALTFUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☒ the box.
Pour valider une fonction cocher ☒ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☒ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☒ la casella
Para poner en fucionamiento una función verifique (señale) ☒ la casilla

☒ : Implemented function ☐ : No implemented function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

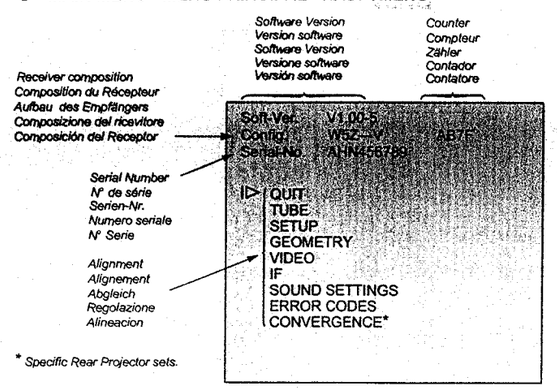
After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☒
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati provvisoriamente sulla RAM
Durante el alineamento, los valores son almacenados temporalmente en RAM

Store	➠	Copîes RAM values into NVM Copie la valeur RAM en NVM Kopieren des Wertes von RAM nach NVM Copiare i valori RAM in NVM Copiar valores RAM en NVM
Restore	➠	Copies all values from NVM into RAM. Copie toutes les valeurs des données NVM en RAM Kopiert alle NVM-Datenwerte in des RAM Copiare tutti i valori da NVM sulla RAM Copia todos los valores de NVM a RAM
Default	➠	All the default values of a page in use are stored in RAM. L'ensemble des valeurs par défaut d'une page courante est chargé en RAM. Sämtliche Standardwerte der aktuellen Seite werden ins RAM geladen Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL - HAUPTMENÜ



* *Specific Rear Projector sets.*

TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÓN Y TV

Config. W5Z....V

Character 1 : Tube type : "A"= 4:3 , "W" =16:9
Character 2 : Teletext external memory detected: "T"=128 page memory; "-" = not (only internal memory)
Character 3 : Ambiant Sensor : "S"= detected, "-" = not (ETC210).
Character 4 : Chassis variant : "N"=Nicam, "V" =Virtual Dolby, "D"=Dolby prologic
Character 5 : Noise reduction upconversion memory detected : "N"= detected; "-" = not
Character 6 : Not used / spare
Character 7 : Not used / spare

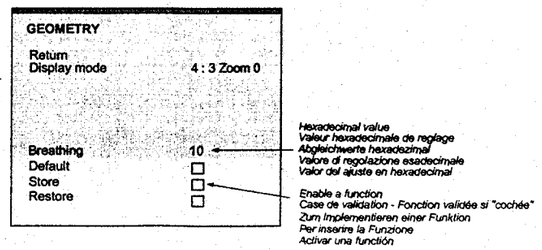
SERIAL-N° A15...

Character 1 : Factory, A= Angers, B= Tarancon, Z= Zyrardow
Character 2 : Year :, H= 1996, J= 1997 etc. (International code UTEC90511)
Character 3 : Month, from 1= January to 9=September.... D=December.
Character 4-9 : Serial N° in the month (from 000000 to 999999)
Character 10-18 : Factory reserved

TIME COUNTER - COMPTEUR DE TEMPS - ZÄHLER - CONTATORE - CONTADOR

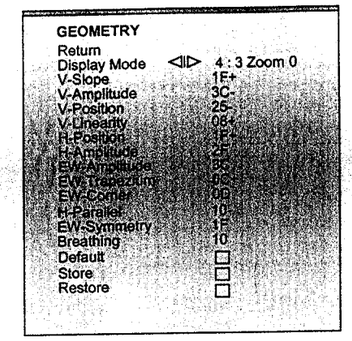
The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contare da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU - UNTERMENÜ



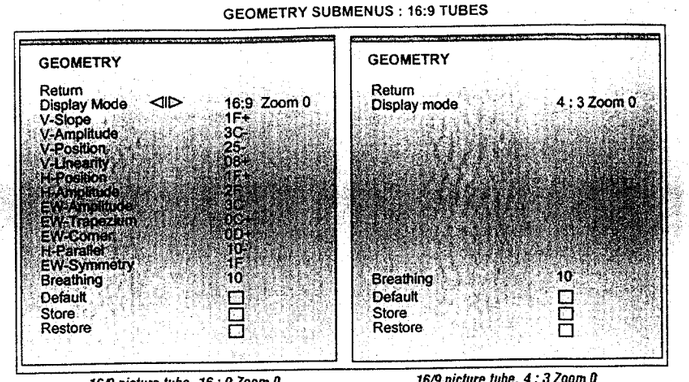
ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

GEOMETRY SUBMENUS : 4:3 TUBES



4 : 3 Zoom 0

GEOMETRY SUBMENUS : 16:9 TUBES



16/9 picture tube, 16 : 9 Zoom 0

16/9 picture tube, 4 : 3 Zoom 0

GEOMETRY

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control or Vol+/- TV keyb. .

Display Mode

Complete geometry adjustment is done according to chassis tube format :
4/3 zoom 0 mode for **4/3 tubes, 16/9 zoom 0** mode for **16/9 tubes.**
In all other modes it is only necessary to adjust some few registers.
The actual format mode has to be displayed in the Geometry Service mode.
It has to be possible to change the format during the geometry alignment without leaving the Service mode.

The available display modes depend on the picture tube format.
4/3 tube : 2 modes 4/3 standard and 16/9
16/9 tube : 2 modes 16/9 standard,
4/3 zoom 0.

The menu shows only the registers which have to be aligned for the actual picture format currently displayed.

Les réglages complets de géométrie sont faits dans le format du tube équipant l'appareil.
Mode **4/3 zoom 0** pour les tubes **4/3**,
16/9 zoom 0 pour les tubes **16/9.**
Dans les autres modes seuls quelques registres nécessitent un réglage.
Le format de réglage doit être affiché dans le menu de géométrie du mode service.
Il est possible de changer le format sans quitter le mode service.

Différents types d'affichage disponibles :

tube 4/3 : 2 modes 4/3 standard et 16/9
tube 16/9 : 2 modes 16/9 standard,
4/3 zoom 0.

Le menu correspondant affiche seulement les registres spécifiques du format sélectionné à régler.

Ein vollständiger Geometrie-Abgleich ist bei **4/3-Röhren** nur in der Zoomstufe **4/3 Zoom 0** und bei **16/9-Röhren** nur in der Zoomstufe **16/9 Zoom 0** notwendig.
In allen anderen Zoomstufen sind eine geringere Anzahl von Einstellungen vorzunehmen.
Während des Geometrie-Abgleiches wird zur Kontrolle ständig das aktuelle Bildformat eingeblendet. Während des Geometrie-Abgleiches ist es möglich, das Bildformat zu ändern, ohne den Service Mode zu verlassen.

Die verfügbaren Bildformate sind abhängig vom Bildrohr-Format.
4/3-Röhre : 2 Bildformate 4/3 Standard und 16/9
16/9-Röhre : 2 Bildformate 16/9 Standard,
4/3 Zoom 0.

Das Abgleich-Menü zeigt immer nur die Funktionen an, die im aktuellen Bildformat eingestellt werden müssen.

GEOMETRY

Display Mode

La disponibilita dei modi display dipende dal formato del tubo:
tubo 4/3 : 2 modi 4/3 Standard, 16/9
tubo 16/9 : 2 modi 16/9 standard, 4/3 Zoom 0.
Il corrispondente menu mostra solo i registri di regolazione.
Le regolazioni complete di geometria vengono fare in base al tubo.
per **tubi 4/3** - 4/3 zoom 0
per **tubi 16/9** - 16/9 zoom 0

In tutti gli altri modi è necessario regolare solo alcuni registri.
Il formato di regolazione deve essere selezionato nel menu di geometria nel modo service.
E' possibile canbiare formato senza uscire da service mode

Los ajustes completos de geometría se harán de acuerdo al formato del tubo montado:
modo 4/3 para tubos de **4/3 zoom 0,**
modo 16/9 zoom 0 para tubos **de 16/9.**
En todos los otros modos, sólo será necesario ajustar unos pocos registros.
El modo de formato actual debe ser accedido desde el Modo Servicio.
Es posible cambiar el formato sin salir del Modo Servicio.

Los formatos que se pueden visualizar, dependen del tipo de tubo.
Tubos de 4/3 : 2 modos, 4/3 estándar, 16/9
Tubos de 16/9: 2 modos, 16/9 estándar,
4/3 zoom 0.
El menú correspondiente mostrará sólo los ajustes a efectuar.

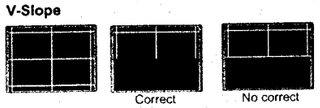
V-Slope

- Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
- Select the **"VS"** line of the menu. The bottom half of the screen will go black.
- Adjust VS until the centre line of the pattern is just invisible.
- Leave the line **"V_Slope"**.
- Switch the test pattern signal to the crosshatch geometry pattern.
- Perform the geometry adjustments described below.

- Appliquer une mire de barres avec seulement une ligne blanche horizontale en milieu de l'écran.
- Sélectionner la ligne **"V-Slope"**. La moitié basse de l'écran devient noire.
- Aligner **"V-Slope"** pour que la ligne médiane soit à peine non visible.
- Commuter la mire en mode de réglage de géométrie (quadrillage).
- Effectuer les reglages de geometrie.

- Speisen Sie ein Testbild mit einem horizontalen Strich in der Bildmitte ein.
- Wählen Sie im Menü die Funktion **"V-Slope"** an. Die untere Bildhälfte wird dunkel.
- Stellen Sie **"V-Slope"** so ein, daß die Mittellinie fast verschwindet.
- Verlassen Sie die Funktion **"V-Slope"**.
- Speisen Sie ein Gittertestbild ein.
- Nehmen Sie die Geometrieeinstellungen wie nebenstehend beschrieben vor.

V-Slope

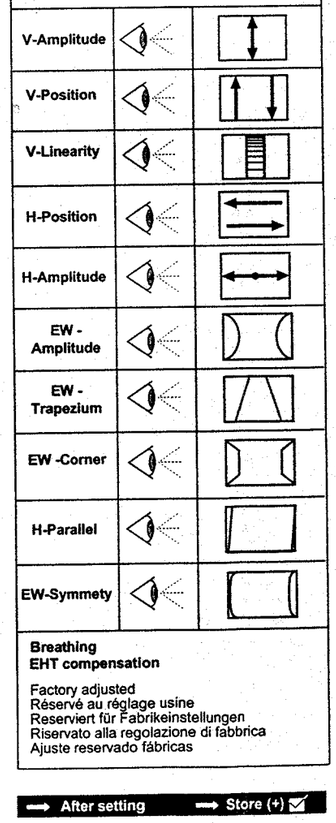


GEOMETRY

V-Slope

- Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
- Selezionare la riga **"V slope"** del menu. La parte bassa dello schermo viene oscurata.
- Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
- Abbandonare la riga **"V slope"**.
- Posizionare il monoscopio
- Effettuare le regolazioni di geometria descritte in precedenza
- Memorizzare.

- Aplique una carta de ajuste con sólo una línea blanca horizontal y una vertical en el centro de la pantalla.
- Seleccionar en el **menú, la línea "V-Slope". La mitad inferior de la** pantalla se pondrá oscura.
- Ajuste **"V-Slope"** justo hasta que la línea horizontal sea invisible.
- Cambiar la carta de ajuste a "cuadrícula" y efectuar los ajustes de geometría descritos a continuación
- Antes de salir, memorizar con "Store"



Breathing
EHT compensation

Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

➡ After setting ➡ Store (+) ☑

GEOMETRY MODE ALIGNMENT

Test Bar pattern used : 4/3 with a geometric circle. Complete geometry Adjustment is done according to chassis tube format : 4/3 zoom 0 mode for 4/3 tubes; 16/9 zoom 0 mode for 16/9 tubes.

Mire de barre utilisée : 4/3 avec cercle de géométrie. les réglages complets de géométrie sont faits dans le format du tube équipant l'appareil : mode 4/3 zoom 0 pour les tubes 4/3; 16/9 zoom 0 pour les appareils équipés de tubes 16/9.

Verwendetes Testbid : 4/3 mit geometrischem Kreis. Ein vollständiger Geometrie-Abgleich ist nur notwendig bei: 4/3-Röhren Zoomstufe 4/3 Zoom 0 und 16/9-Röhren Zoomstufe 16/9 Zoom 0 (siehe unten).

Formato Testo utizzato: 4/3 con cerchio geometrico. La regolazione viene effettuata nel formato del telaio del cinescopio: 4/3 zoom 0 :tubo 4/3; 16/9 zoom 0: tubo 16/9.

Carta de ajuste utilizada : 4/3 con círculo geométrico. El ajuste completo de la geometría hay que hacerlo de acuerdo con el tipo de chasis y el formato del tubo : Modo 4/3 zoom 0 para tubos de 4/3; modo 16/9 zoom 0 para tubos de 16/9.

4/3 picture tube

A ETC210 4/3 set needs a geometry alignment only in the 4/3 Zoom 0. All other formats and zoom mode are calculated.

Un chassis ETC210 4/3 ne nécessite des réglages de géométrie que dans le mode 4/3 zoom 0. La géométrie des autres formats et zoom est calculée.

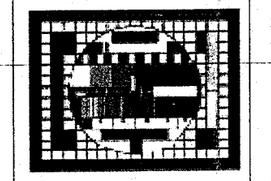
Beim Chassis ETC210 ist ein Geometrie-Abgleich nur im Bildformat 4:3 Zoom 0 . Alle anderen Formate und Zoomstufen werden berechnet.

I telai ETC210 4/3 richiedono la regolazione di geometria solo in formato 4/3 zoom 0. Tutti gli altri formati e modo zoom vengono calcolati.

Un TV ETC210 4/3 necesita ajuste de geometría sólo en el modo 4/3 Zoom 0. Todos los demás formatos y modos de zoom se calculan automáticamente.

Signal : 4/3 test pattern

4 / 3
standard mode
zoom 0

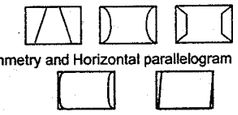


Overscan V=107% , H=107%

1- Adjust Vertical Slope.
2- Adjust Vertical position and Vertical amplitude
3- Adjust Vertical linearity

4- Adjust Horizontal Delay, Horizontal Position and Horizontal amplitude

5-Adjust EW Amplitude ,EW Shape and Trapezium, EW Corner,



6-Adjust EW Symmetry and Horizontal parallelogram

16/9 picture tube

A ETC210 16/9 set needs a geometry alignment only in the 16/9 Zoom 0 mode. All other formats and zoom mode are calculated.

Un chassis ETC210 16/9 ne nécessite des réglages de géométrie que dans le mode 16/9 zoom 0. La géométrie des autres formats et zoom est calculée.

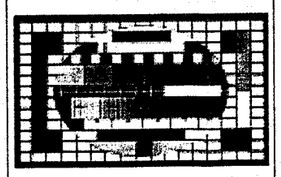
Beim Chassis ETC210 16:9 ist ein Geometrie-Abgleich nur im Bildformat 16:9 Zoom 0. Alle anderen Formate und Zoomstufen werden berechnet.

I telai ETC210 16/9 richiedono una regolazione di geometria solo nel formato 16/9 e modo zoom 0. tutti gli altri formati e modo zoom vengono calcolati.

Un TV ETC210 16/9 necesita ajuste de geometría sólo en 16/9 modo Zoom 0. Todos los demás formatos y modos de zoom se calculan automáticamente.

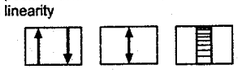
Signal : 4/3 test pattern

16 / 9
standard mode
zoom 0

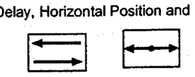


Overscan V=107%, H =104%

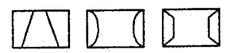
1- Adjust Vertical Slope.
2- Adjust Vertical position and Vertical amplitude
3- Adjust Vertical linearity



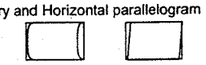
4- Adjust Horizontal Delay, Horizontal Position and Horizontal amplitude



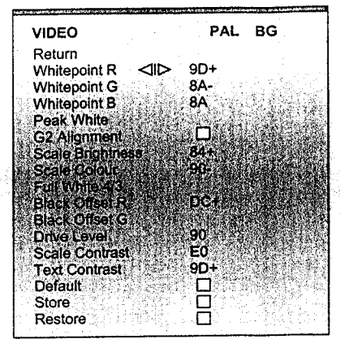
5-Adjust EW Amplitude ,EW Shape and Trapezium, EW Corner,

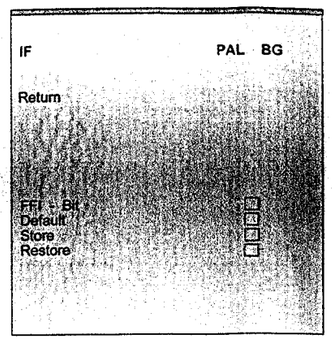


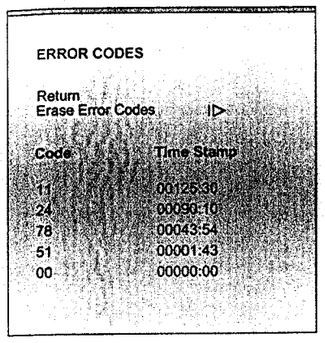
6-Adjust EW Symmetry and Horizontal parallelogram



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION







Color standard or RGB is autodetected and displayed opposite the displayed opposite the menu title.

VIDEO — **PAL**

Return
Closes the sub-menu and returns to the "Main Service Menu"
Retourne au menu principal.
Schließt das Untermenü, und das Haupt-Menü des Service-Modes erscheint.
Chiude il sottomenu e fa apparire il menu principale Service Mode.
Cierra el submenú. El menú Field Service Mode aparece.
Press </>: remote control.

Whitepoint R*	☼+◑+◑= standard Grey scale test pattern white =50% Amplitude: 350mVBW RF-PAL (BG) RF-SECAM (L) AV1- RGB	
Whitepoint G*		
Whitepoint B*		↑ grey
Peak-White**	☼+◑+◑= standard Peak white test pattern white =100% RF-BG; RF-L; AV1 RGB AUX (TAK, DVD, Digital Mode) Colourimeter	

Tube Type	[Nits]
28"XF 16/9 TTD Gen.2	350
29"XF 4/3 TTD Gen.2	300
32"XF 16/9 TTD	310

G2 Alignment	Display a full screen black OSD Adjust G2 with SCREEN potentiometer: see adjust table Ecran totalement noir. Régler G2 avec le potentiomètre SCREEN : voir tableau des réglages.(p.12). Das Bild wird dunkelgetastet Gleichen Sie G2 mit dem SCREEN-Potentiometer wie auf seite 12. beschrieben ab. Visualizzare uno schermo nero e regolar il potenziomero G2 riferendos alla tabella regolazione (p.12) Pantalla totalmente oscura sin OSD. Ajustar la G2 con el potenciómetro SCREEN: ver tabla (p.12). ☑ G2_adjust on ☐ Reset G2-adjust and restores the video menu.

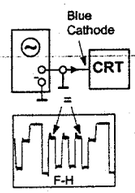
Note :
* Adjust separate for PAL RF / SECAM RF, RGB

** After PEAK white adjustment control white points setting.
Repeat the adjustments if necessary.

VIDEO — **PAL**

Scale Brightness
☼+◑+◑= standard
Grey scale test pattern
white =100%
black

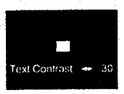
Scale Colour*
☼+◑+◑ = standard
PAL, SECAM, AV1_RGB,
75% Colour bar test pattern via RF.

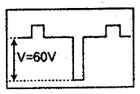


Full White 4/3 (16/9)
Black Offset R
Black Offset G
Drive Level
Scale Contrast
Factory adjusted
Réservé au réglage usine
Reserviert für Fabrikeinstellungen
Riservato alla regolazione di fabbrica
Ajuste reservado fábricas

Text Contrast ☼+◑+◑ = standard

Adjust Text contrast for V=60V at pin 11 (Blue) of the CRT : 40% V peak white
Ajuster Text Contrast pour obtenir un niveau de sortie V=60V sur la cathode Bleue du tube (point 11 de la CRT): 40% V peak white.
Stellen Sie mit Text Contrast V=60V an der Blau-Kathode (Pin 11) der Bildröhre ein: 40% Vpeak white
Regolare il guadagno contrasto televideo per ottenere al catodo del blu un livello pari a V=60V (CRT pin 11): 40% Vpeak white.
Ajuste Text Gain para dejar V=60V en azul del TRC (CRT Patilla 11): 40% Vpeak white





CRT Pin 11

→ After setting → Store (+) ☑

IF

Return
Closes the sub-menu and returns to the "Main Service Menu"
Retourne au menu principal.
Schließt das Untermenü, und das Haupt-Menü des Servic e-Modes erscheint.
Chiude il sottomenu e fa apparire il menu principale Service Mode.
Cierra el submenú. El menú Field Service Mode aparece.
Press </>: remote control.

FFI - Bit	Fast Filter (IF / PLL) Filtre rapide (FI / PLL) Schnelles filter (ZF / PLL) Filtro /rapido (IF / PLL) ☑ Asia ☐ Europ

SOUND SETTINGS
Return
Subwoofer Freq. Medium 0F
Low Pass Freq. Medium 0B+
High Pass Freq. Medium 08-
Effect Strength Medium 32-
Harmonic Content Medium 00-
Amplitude Limit Medium FD+
Subwoofer Freq. High 0D
Low Pass Freq. High 0B
High Pass Freq. High 08+
Effect Strengh High 36
Harmonic Content High FD
Amplitud LimitHigh
Store
Restore

SOUND SETTINGS

Adjust "Sound settings" registers according to the TV environments (refer to the below table) when the NVM memory has been replaced.
Règle le contenu des registres "Sound settings" selon l'environnemnt du TV en cas de remplacement de la NVM. (voir table ci-dessous)
Wurde das NVM (EEPROM) erneuert, müssen im Menü "SOUND SETTINGS" die Werte entsprechend der unten stehenden Tabelle eingestellt werden.
Quando viene sostituita la memoria NVM regolare i registri "Sound setting" in funzione all'anbientazione TV (riferirsi alla tabella sottoindicata).
Ajustar los "Parámetros de Sonido" de acuerdo a las caracteristicas del modelo de TV (ver tabla),después de sustituir la memoria NVM.

TV Cabinet 28WH..., 32WH..., 34DC...	
Subwoofer Freq. Medium	05
Low Pass Freq. Medium	0A
High Pass Freq. Medium	07
Effect Strength Medium	28
Harmonic Content Medium	00
Amplitude Limit Medium	04
Subwoofer Freq. High	0C
Low Pass Freq. High	0A
High Pass Freq. High	07
Effect Strengh High	36
Harmonic Content High	00
Amplitud LimitHigh	04

→ After setting → Store (+) ☑

ERROR CODE

Clear Error Codes To clear all error codes stored in the NVM. Action: Long press (> 2.5sec.).
Press </>/OK: remote control.

CODE LED Error Codes

1- The last five error codes are stored and displayed with a time stamp from the run time counter
2- If an error occurs that is already in the list the time stamp is updated .
3- The errors are displayed with the most recent error on top of the list. The others follow with descending time stamps.
Displaying Error Codes with LED:
1- In addition to storing an error code it must also be displayed with the TV's Standby LED.
Only the last error that occured is displayed.
2- Decimal error codes from 11 to 99 (with second digit not being 0) are signalled.
3- The error code is displayed as two separate digits separated by a suitable pause, this is repeated until the either the TV fixes the fault or the TV is repaired.
For example Error-code : 23 will be displayed thus :
2 flashes and a short pause
3 flashes and a long pause
.....
List of Errors Codes : see table

1- Mémorise les cinq derniers codes erreurs. Le cumul du temps de fonctionnement entre le démarrage initial du chassis en usine et le moment où s'est produit l'erreur est indiquée en colonne "Time stamp".
2. Si une erreur qui est déjà dans la liste survient de nouveau le temps cumulé (Time stamp) est mis à jour.
3- Les erreurs les plus récentes sont affichées en tête de liste. Les autres suivent en descendant.
Affichage des Codes Erreurs par LED:
1- Les Codes erreur sont signalés par le clignotement de la LED Standby du TV .Seulement la dernière erreur survenue est affichée.
2- Les codes Erreurs décimaux vont de 11 à 99. (le second digit n'est jamais égal à 0) .
3- Le code Erreurs est signalé par deux digits selon une séquence spécifique
Exemple :
Code Erreurs : 23 affiché
2 flashes, courte pause
3 flashes : longue pause
.....
Voir ci-après la liste des codes erreurs

1. Es werden die letzten 5 Fehlercodes mit der Laufzeit des Auftretens angezeigt.
2. Tritt ein Fehler auf, der schon in der Liste steht, wird nur die Laufzeitanzeige aktualisiert.
3. Der zuletzt aufgetretene Fehler steht an erster Stelle. Die vorhergegangenen Fehler werden nach abnehmender Laufzeit gelistet.
Anzeige des Fehlercodes über die Standby-LED
1- Der Fehlercode wird nach dem Auftreten des Fehlers zusätzlich über die Standby-LED des TV-Gerätes durch Blinken angezeigt.
2- Es können die Fehlercodes 11 bis 99 (ohne diejenigen , die eine Null als zweite Stelle haben) dargestellt werden.
3- Die beiden Dezimalstellen des Code werden durch Blinken, getrennt von einer Pause angezeigt. Dies wird wiederholt, bis der Fehler nicht mehr auftritt oder das Gerät repariert wird.
Beispiel der Anzeige für den Fehlercode 23:
Zweimaliges Blinken der LED, kurze Pause
Dreimaliges Blinken der LED, lange Pause.
Aufstellung der Fehlercodes: siehe Tabelle

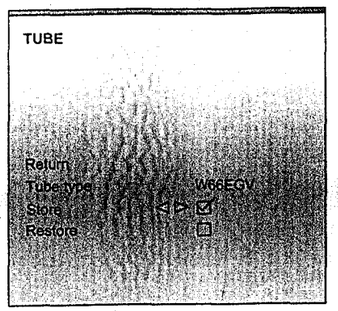
ERROR CODE

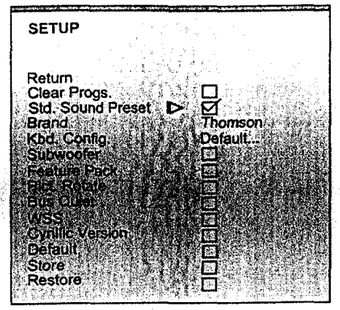
CODE LED Error Codes

1- Gli ultimi cinque codici errore vengono memorizzati e visualizzati con un time stamp dal run time counter.
2- Se si manifesta un errore già presente nella lista il time stamp viene aggiornato
3- Gli errori vengono visualizzati con l'errore più recente in cima alla lista.
Gli altri errori seguono con sequenza discendente del time stamp
Lampeggi LED: Trasmissione messaggi
1 Oltre alla memorizzazione il codice errore, deve anche essere visualizzato dal LED di standby.
2 Gli errori vengono segnalati con codici decimali da 11 a 99 (non con 0 al secondo digit)
3 Il codice errore viene visualizzato da due digit separati da una pausa,
queto viene ripetuto finchè il difetto è presente o il TV viene riparato
Per esempio il codice errore 23 sarà visualizzato:
2 lampeggi e una breve pausa
3 lampeggi lampeggi e una lunga pausa
.....
Lista Codici Errore: segue tabella

1- Los últimos 5 códigos de error son almacenados desde el contador de tiempo de vida y mostrados en la columna "time stamp"
2- Si ocurre un error que ya existe en la lista, éste se actualizará al último "time stamp"
3- Los errores más recientes son los mostrados en la parte superior de la lista. Los demás siguen en orden descendiente de "time stamp"
Códigos de error mostrados con el LED:
1- Además del almacenamiento, los codigos de error también se muestran con el LED de standby del TV. Sólo se muestra el último error ocurrido.
2- Sólo se muestran los códigos de error decimales del 11 al 99 (dígito de las decenas empezando por cero, no)
3- El código de error es mostrado como 2 dígitos separados por una pausa corta. Se repite hasta que se recupere el fallo o el TV sea reparado.
Por ejemplo, el código de error 23 se mostrará como:
2 destellos seguidos de una pausa corta
3 destellos seguidos de una pausa larga
.....
Lista de códigos de error: ver tabla

ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION





TUBE

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu principale Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control or Vol+/- TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters).
Once entered, the tubes geometry and video default values are immediately activated.
Variable geometry and video parameters are written to the NVM when the "STORE" line is selected. See below the tube type number list.

Definit le tube exact après changement de NVM Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramètres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach dem Tausch des NVM (EEPROM) muß der richtige Bildrohrtyp eingegeben werden. Es werden dann sofort die entsprechenden Geometrie-und Video-Defaultwerte aktiviert. Variable Geometrie-und Videowerte müssen mit "STORE" in das NVM geschrieben werden. Liste der Röhren: siehe unten.

Definire il tubo appropriato dopo aver cambiato la NVM; I valori per il nuovo tipo di tubo (con video e geometria) sono immediatamente attivi. I parametri per video e geometria variabili vengono immessi nella NVM quando viene selezionata la funzione Store. Si veda la lista dei tubi riportata sotto.

Definir el tubo correcto después de haber cambiado el NVM.Los nuevos valores de tipo de tubo (con la video y la geometria por defecto) se activan inmediatamente.
Los parámetros variables de geometria y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

TUBE NAME	LIST	DESCRIPTION
A66EHJ 43X12	A66EHJ	4/3 28"MP (1)
A68EGD 038X322	A68EGD	4/3 29"SF (2)
A68EJV 038X322	A68EJV	4/3 29"SF,AK (3)
A68EJZ 011X121	A68EJZ	4/3 29"XF (4)
A68ELA 011X121	A68ELA	4/3 29"XF (5)
A68QCP 893X007	A68QCP	4/3 29"XF (4)
A80EJZ 011X427	A80EJZ	4/3 34"XF (4)
4X3 NW	4X3 NW	
W66EGV 023X122	W66EGV	16/9 28"SF (2)
W66EJY 011X121	W66EJY	16/9 28"XF (2)
W66EJU 011X121	W66EJU	16/9 28"SF (6)
W86 Gen2	W66Gen2	16/9 28"XF (7)
W66QDE 993X214	W66QDE	16/9 28"XF (2)
W76EGV 023X122	W76EGV	16/9 32"SF (2)
W76EJY 011X121	W76EJY	16/9 32"SF (2)
16X9 NW	16X9NW	
RP 4X3	RP 4X3	4/3 42", 46"

(1) : AK, Coty M
(2) : Invar vector gun, BSVM
(3) : AK,vector gun
(4) : Invar, static focus, BSVM
(5) : Invar,static focus,BSVM Gen2
(6) : AK, vector gun, BSVM
(7) : Invar, vector gun, BSVM

After setting → Store (+)

SETUP

Return

Closes the sub-menu and returns to the "Main Service Menu"

Retourne au menu principal.

Schließt das Untermenü, und das Haupt-Menü des Service-Modus erscheint.

Chiude il sottomenu e fa apparire il menu *principale Service Mode.*

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control or Vol+/- TV keyb. .

Clear Prog.

Clears all programms stored in memory and resets all Picture and Sound settings to the factory values and returns the TV to the "Out of factory" mode.
The selection is a long press action (2.5 seconds).
Efface tous les programmes mémorisés, initialise les valeurs SON et IMAGES aux valeurs usines et retourne le TV en mode "sortie usine".
Fonction valide par une longue pression (>2.5s.) sur la touche de sélection </> .

Löscht alle Programmplätze und setzt alle Bild- und Toneinstellungen auf Fabrikwerte zurück. Der AUTO-INSTALL-Modus kann durch einen langen Knopfdruck (>2,5s) initialisiert werden.

Clear Prog.
Cancella tutti i programmi in memoria e regola i Valori analogici SUONO IMMAGINE: ai livelli di fabbrica.Riportare la TV al modo
Selezione:
pressione prolungata: 2,5 sec. su il pulsante </>.

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores analógicos de IMAGEN y SONIDO: valores de fábrica.Regreso a la TV para "salir del modo fábrica".
Selección : Presión larga igual a 2,5 s.

Std.Sound Preset

Sets the default value for the Standard Sound Preset.Selection is a long press action (2.5 seconds).
Initialise les valeurs par défaut du son.
Fonction valide par une longue pression (>2.5s.) *sur la touche de sélection </> .*

Setzt die Ton-Einstellungen auf Default-Werte. The selection is a long press action (2.5 seconds).
Regolare i valori di default per le Preregolazioni Suono Standard : pressione prolungata: 2,5 sec. su il pulsante </>.

Ajusta el valor por defecto para el Preajuste del Sonido Standard.
Selección: Presión larga igual a 2,5 s.

Factory adjusted

Brand

Set the "Brand": Thomson, Telefunken, Other
Factory adjusted

Kbd. Config.

Specifies the type of the local keyboard. (Horizontal or Vertical type) in the chassis.
Spécifie le type de clavier monté sur un chassis (type Horizontal ou Vertical)
"Bestimmt den Typ des Nahbedienteils." "Das Nahbedienteil kann an unterschiedlichen Stellen in verschiedenen Ausrichtungen eingebaut werden."

Specificare il tipo della tastiera comandi
La tastiera comandi può essere montata in una locazione differente in funzione del telaio

Especifica el tipo de teclado local.
El teclado local puede ser montado en diferentes posición y orientación en el chasis
Default value : Horizontal version
Factory adjusted

After setting → Store (+)

SETUP

Subwoofer

Enable the subwoofer on equiped set.

Validation du Subwoofer sur les appareils équipés .

Einschalten des Subwoofers (wenn vorhanden).

Abilita il subwoofer negli apparecchi equipaggiati.

Validaciónde que existe el subwoofer.

☑ Subwoofer enable ☐ Subwoofer disable

Feature Pack

Enables or disables the option to decode and display EPG program data,the Graphic Equalizer, Picture Presets and Sound Presets features (in user menu).

Validation ou inhibition du décodage/affichage des données du programme EPG, de l'équalizer graphique, des pré-réglages son et image dans le menu utilisateur.

Ein- und Abschalten der Optionen Decodierung und Anzeige der EPG Programmdaten, Grafischer Equalizer, Bildvoreinstellungen und Tonvoreinstellungen (in den Benutzermenüs).

Abilita l'EPG, l'equalizzatore grafico, Ipreset Video e preset suono
(in menu suono)

Valida las funciones EPG, Ecualizador gráfico y predeterminados para imagen y sonido (en el menú "Ajustes personales")

☑ Enable ☐ Disable

Picture Rot

Enables the "Earth Field Correction" function (EFC) on ETC210 16/9 and some large screen 4/3 by adding a special bargraph in the "personal settings" menu (user menus).
It is necessary to validate this function if the EFC correction circuit is inserted.

Valide la fonction "correction de champ magnétique terrestre" (EFC) sur les chassis ETC210 16/9 et les appareils 4/3 grand écran par addition d'un bargraphe spécifique dans le menu "réglages personnels" (menu utilisateur).
Cette fonction doit être validée lorsque les *circuits de correction "EFC" sont insérés.*

Freigabe der Erdfeldkorrektur (EFC) bei ETC210 16/9 und einigen 4/3 Geräten.
Im Menü "Eigene Einstellungen" (Menü "Installation") wird ein zusätzlicher Anzeigebalken eingeblendet Nach dem Einbau des EFC-Moduls ist diese Funktiozu aktivieren.

Attiva la funzione "Correzione del campo *magnetico terrestre" (EFC) sul telaio* ETC210 16/9 e alcuni grandi schermi 4/3 , aggiungendo una speciale barra grafica nei menu di "Menu Principale".
Se il circuito di correzione è montato, è necessario convalidare questa funzione.

Valida la función "corrección del campo magnético terrestre" (EFC) en los chasis ETC210 and some large screen 4/3 añadiendo una barra gráfica en el menú "Ajustes personales". Es necesario validar ésta función si el circuito de corrección EFC está montado.

☑ Rotation bargraph available menu, EFC function active.

☐ Rotation bargraph suppressed from personal settings, EFC circuit disactivated

After setting → Store (+)

SETUP

Bus Quiet

In "Bus Quiet", the NVM can be read, modified and reprogrammed by means of a NVM Programmer.
To access "Bus Quiet" : Long press ">".
The TV should remain in "Bus Quiet" mode until either Exit, Left, Right, Up,Down or Standby keys on the RCU or local keyboard are pressed; at which point the TV should carry out a warmstart in order to prevent differences between the NVM and RAM contents.
After returning from Bus Quiet, the software checks the NVM content.
If it is not valid, the software perform a new default writing of the NVM content.

En mode bus quiet la NVM peut être lue, modifiée et reprogrammée.
Accès au mode Bus quiet :
Longue pression ">".
Utiliser l'une des touches Exit, Gauche, Droite Haut, Bas, standby ou une des touches du clavier pour sortir le téléviseur du mode bus quiet.
A partir de ce point de sortie le démarrage du téléviseur s'effectue à chaud pour éviter toute différence des contenus RAM et NVM. En sortie de mode bus quiet, le logiciel contrôle le contenu de la NVM.
S'il n'est pas correct le logiciel exécute une nouvelle écriture par défaut de celle-ci.

Im "Bus Quiet"-Modus kann der Inhalt des NVM mittels eines externen NVM-Programmiergerätes ausgelesen, geändert oder neu programmiert werden. "Bus Quiet" wird durch einem längeren Druck auf ">" aktiviert. Das Gerät bleibt solange im "Bus Quiet" - Mode, bis durch Druck auf die EXIT-, LINKS-, RECHTS-, HOCH-, RUNTER- oder STANDBY-Taste (am Gerät oder auf der Fernbedienung) ein Warmstart des Gerätes veranlaßt wird, um unterschiedliche Daten in RAM und NVM zu vermeiden. Es folgt ein Software-Check des NVM-Inhaltes.
Sollte dieser nicht gültig sein, wird der Inhalt mit Default-Werten überschrieben.

In Modo Bus Quiet, la memoria NVM può *essere letta, modificata o riprogrammata.* Per accedere al modo Bus Quiet premere a lungo il tasto ">".
Il TV rimane in modo Bus Quiet fino a che vengono premuti i tasti Exit, o Destro Sinistro, Su o Giù o Standby dal telecomando o dalla tastiera locale; a questo punto il TV riparte per evitare interferenze tra i contenuti della memoria NVM e della RAM.
All'uscita dal modo Bus Quiet, il software controlla il contenuto della memoria NVM. Se tale contenuto non è valido, il software provvede a una nuova programmazione della NVM con l'inserimento dei dati di default.

En bus quieto, la NVM puede ser leída, modificada y reprogramada.
Acceso a bus quieto : Larga presión en ">"
El TV permanecerá en bus quieto hasta que se pulse cualquiera de las teclas siguientes: Exit, "<", "^", "v", ">"o Standby del telemando o del teclado.
En este momento el TV arrancará para evitar cualquier diferencia entre los contenidos de la RAM y NVM.
Al salir del modo bus quieto, el software comprueba el contenido de la NVM.
Si no coincide, el software ejecuta la escritura de los datos en la NVM.

☑ Bus quiet enable ☐ Bus quiet disable

After setting → Store (+)

SETUP

WSS

Automatic detection of DOLBY surround sound and 16/9 format pictures via Teletext line number 23.
WSS is valid on all programmes.

Détection automatique du son surround DOLBY et du format 16/9 via la ligne 23 du Teletxte.
Valide pour tous programmes.

WSS (nur bei 16:9 oder Dolby)
Auswertung der Zeile 23 zur automatischen Format-und Dolbyumschaltung.

Identificazione "auto-Dolby" e "format 16/9" via televideo alla riga 23.La selezione di WSS Processing vale per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los *programas.*

☑ Detection enable ☐ Detection disable

Cyrillic Version

The status of this check box depends on the type of microcomputer (uC) used in the TV set (Cyrillic or greek) . It must be ticked if a cyrillic microcomputer (uC) is used and unticked if a greek version is used .
The status of this check box defines the languages available in the language selection menu. The slovacian, czech and russian languages are available with the cyrillic version and the turkish and greek languages with the other one.
It is possible to identify which uC is used to properly set this feature in the service menu by watching special (cyrillic) VT pages.

Version Cyrillique

Cette case de validation depend de la version du microprocesseur (uP) équipant le TV (Cyrillique ou grec) . Elle doit être cochée si le mocroprocesseur (uP) est une version cyrillique et vide s'il s'agit d'une version greque. L'état de cette case définit les langues disponibles dans le menu de sélection .
La version cyrillique offre les langues slovaque, tchèque et russe tandis que la version greque offre les langues turque et greque.
Il est possible d'identifier le type de uP dans le mode service en sélectionnant les pages télétextes.

Kyrillische Version

Der Status dieser Check-Box ist abgängig von der Sprachversion des eingebauten Microcontrollers.
Bei der Verwendung der kyrillischen Version muss die Box aktiviert werden, bei Verwendung der griechischen Version muss die Box gelöscht sein. Der Status der Box legt die zur Verfügung stehenden Sprachen im Sprachmenü fest.
Die kyrillische Version unterstützt Slowakisch, Tschechisch und Russisch. Die griechische *Version unterstützt Griechisch und Türkisch.* Eine Identifizierung der eingebauten Microcontroller-Version kann durch Aufrufen von Videotextseiten mit kyrillischem Inhalt vorgenommen werden.

uC ST92R195B JAM
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Slovacian/Czech, Russian Cyrillic.**

uC ST92R195B JAL
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Turkish, Greek.**

After setting → Store (+)

SETUP

Versione Cirillica

Lo stato del controllo di queta casella dipende dal tipo di microprocessore (uP) utilizzato dal TV (Cirillico o Greco).
Tale casella deve essere selezionata se viene utillizzato un microprocessore Cirillico e non selezionata se utilizzato un microprocessore Greco.
Lo stato di questa selezione definisce *l'abilitazione della selezione del linguaggio nel* menu.
I linguaggi per la Slovacchia, la Reppublica Ceca e la Russia sono disponibili nella versione microprocessore Cirillico, mentre il linguaggio Turco e Greco sono disponibili nella versione Greca.
E' posibile identificare quale uC è presente nel TV e correttamente abilitato nel menu di service mode
analizzando una speciale pagina televideo (Cirillica)

Versión Cirílico

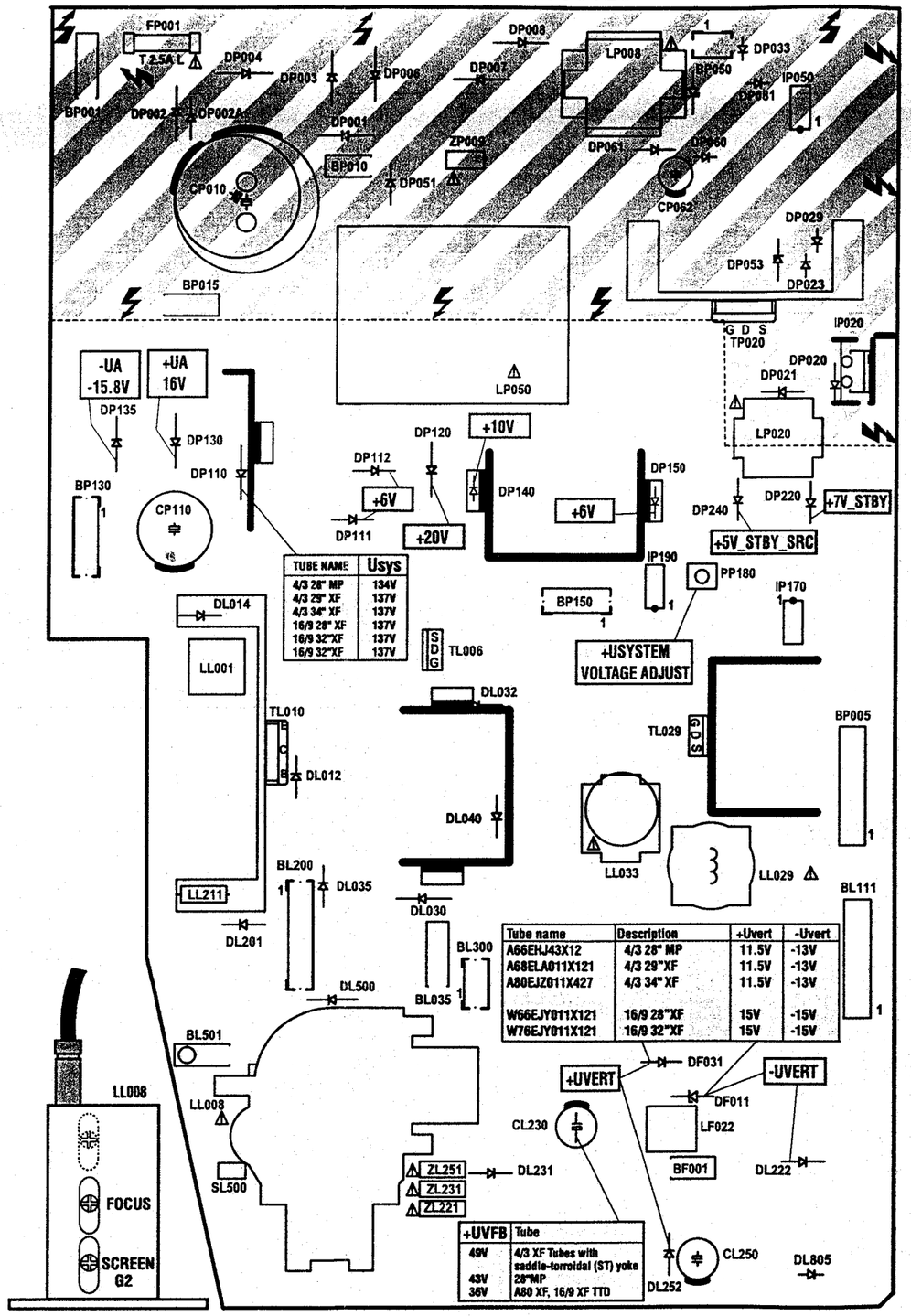
El estado de esta casilla depende del tipo del microprocesador (µP) utilizado en el TV (Cirílico o Griego). Debe ser marcada si se utiliza un µP cirílico y desmarcada si se utiliza el griego.
El estado de esta casilla define los idiomas disponibles en el menú de selección de idiomas. Los idiomas Eslovaco, Checo y Ruso están disponibles en la versión cirílico. El Griego y el Turco en la versión Griego.
Es posible identificar el µP utilizado para seleccionar el adecuado, en modo servicio mirando en las páginas especiales (cirílico) del teletexto.

uC ST92R195B JAM
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Slovacian/Czech, Russian Cyrillic.**

uC ST92R195B JAL
English, French, German, Italian, Spanish, Portuguese, Dutch, Danish, Swedish, Norwegian, Polish, Hungarian, **Turkish, Greek.**

After setting → Store (+)

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGULATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



TUBE NAME	Usys
4/3 28" MP	134V
4/3 29" XF	137V
4/3 34" XF	137V
16/9 28" XF	137V
16/9 32"XF	137V
16/9 32"XF	137V

Tube name	Description	+Uvert	-Uvert
A66EHJ43X12	4/3 28" MP	11.5V	-13V
A68ELA011X121	4/3 29"XF	11.5V	-13V
A80EJZ011X427	4/3 34" XF	11.5V	-13V
W66EJY011X121	16/9 28"XF	15V	-15V
W76EJY011X121	16/9 32"XF	15V	-15V

+UVFB	Tube
49V	4/3 XF Tubes with saddle-toroidal (ST) yoke
43V	28"MP
36V	A80 XF, 16/9 XF TTD

Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chasis conectada a la red

Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un transformatore per isolarvi dalla rete

ETC210
First issue 07 / 03

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONE - AJUSTES

U Sys	PP180	Standard TV - Settings : ☼+◑+◑ =50% TV to AV1 : Black test pattern	V= DP 110	Tube name / Description / Usys jumper / RP900 Usys divid. / Usys A66EHJ13X12 / 4/3 28"MP / JP911 / 33K2 / 134V A68ELA011X121 / 4/3 29"XF / JP912 / 33K2 / 137V A80EJZ011X427 / 4/3 34"XF / JP912 / 33K2 / 137V W66EJY011X122 / 16/9 28"XF / JP912 / 33K2 / 137V W76EJY011X122 / 16/9 32"XF / JP912 / 33K2 / 137V
U G2 SERVICE MODE	SERVICE MODE G2 potentiometer : SCREEN	-Select and enable the "G2 Alignment" item in VIDEO menu of the Service Mode : the displayed will change to a full black OSD screen. The following adjustment is best carried in semi-darkness: - Adjust the **SCREEN** potentiometer (LL008) so that the retrace lines are just visible. - Now carefully adjust the **SCREEN** potentiometer until the retrace lines just become invisible. - Press any RCU key to leave the G2 alignment. Note: If the G2 value is set too low, the chassis will display error code 36 (tube does not get warm in time). - Sélectionner et valider le réglage "G2 Alignment" dans le menu Vidéo de Service Mode: l'écran devient totalement noir. En obscurité: - Régler le potentiomètre **"SCREEN"** (LL008) pour apercevoir le retour des lignes. - Régler ensuite le potentiomètre **"SCREEN"** pour rendre juste invisible les lignes de retour. - Appuyer sur une des touches de la télécommande utilisateur pour sortir du mode G2 Alignment. Note : En cas de réglage G2 trop faible le chassis passe en code panne 36 (absence de l'information tube chaud. - Wählen Sie im Service-Mode im Menü VIDEO die Funktion "G2 Alignment" an: der Bildschirm wird schwarz. Die folgenden Einstellungen sollten in einem abgedunkelten Raum vorgenommen werden. - Stellen Sie den Einsteller **SCREEN** (am DST LL008) so ein, dass Rücklaufstreifen sichtbar werden. - Stellen Sie den Einsteller SCREEN so ein, dass die Rücklaufstreifen gerade unsichtbar werden. - Drücken Sie irgendeine Taste auf der Fernbedienung um den G2-Abgleich zu verlassen. Achtung: Wenn die Schirmgitter- (G2-) Einstellung zu niedrig ist, kann der Fehlercode 36 (Bildrohr nicht rechtzeitig aufgeheizt) angezeigt werden. Selezionare e abilitare"G2 Alignment" interno al menu VIDEO del Service Mode: Verrà visualizzato uno schermo nero. In condizione con ambiente scuro. Regolare il potenziometro **SCREEN** (LL08) per rendere visibili le ritracce sullo schermo Regolare il potenziometro **SCREEN** per eliminare le ritracce sullo schermo Premere un tasto del tecomando per abbandonare G2 alignment. NOTA: se la regolazione della tensione G2 è tropppo bassa il telaio visualizzerà il codice 36 (il tubo non raggiunge la temperatura nel tempo richiesto) - Seleccionar y validar la línea del "ajuste G2" en el menú VIDEO del Modo Servicio : La pantalla se pondrá oscura y el OSD pasará a color negro. Cuando esté oscura: - Ajustar el potenciómetro **SCREEN** (LL008) hasta hacer visibles las líneas de retrazado. - Ajustar el potenciómetro **SCREEN** justo, hasta hacer invisibles las líneas de retrazado. - Pulsar cualquier tecla del telemando para salir del ajuste de G2. Nota: Si el valor del ajuste de G2 es muy bajo, el chasis puede indicar el código de error 36 (TRC no se calienta en el tiempo establecido)	
FOCUS	FOCUS	Standard TV - Settings : ☼+◑+◑ =50% TV to AV1 Test pattern Sharp picture		

EACEM-IRIS REPAIR CODING SYSTEM

CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET/RAINY/SNOWY ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED/TRANSPORT DAMAGE
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATIONS/SOFTWARE/MODE/CHANNELS/FREQUENCY BAND
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
M	FOR A SHORT WHILE AFTER SWITCH-ON
N	AFTER MAKING A COPY
O	UNDER STRESSED CONDITIONS / HIGH LOAD
P	AT SWITCH-OFF

(*1)

CAUTION

THE 'X' EXTENDED SYMPTOM CODES (*-**X) SHOULD ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE
1	GENERAL	110	POWER PROBLEM OR NOT OPERATING	120	CHARGING PROBLEM	130	DISPLAY FUNCTION PROBLEM	140	ABNORMAL NOISE
		111	NO POWER	121	NO BATTERY CHARGING	131	FAULTY DISPLAY	141	CRT DISCHARGING NOISE
		112	NO POWER WHEN USING AC-ADAPTER	122	INCOMPLETE BATTERY CHARGE	132	FAULTY LAMP/LED OPERATION	142	EHT DISCHARGING NOISE
		113	NO POWER WHEN USING DRY BATTERIES	123	CHARGING TIME TOO LONG	133	FAULTY LEVEL METER OPERATION	143	NOISY CABINET/CRACKING TRAYS
		114	NO POWER WHEN USING RECHARGEABLE BATTERIES	12X	OTHER 'CHARGING' PROBLEM	134	FAULTY ON-SCREEN DISPLAY OPERATION	144	NOISY TRANSFORMER/HUMMING
		115	NO POWER FROM SOLAR CELL			135	ELECTRONIC TUNING DISPLAY FAULT	145	NOISY COMPONENT(S)
		116	NO POWER WHEN USING A CAR BATTERY			136	MECHANICAL TUNING DISPLAY FAULT	146	RATTLE
		117	SHORT OPERATION TIME/SHORT BATTERY LIFE			137	FAULTY TIME CODE DISPLAY	147	CLICKING
		118	POWER-OFF FUNCTION NOT WORKING			138	FAULTY ALARM/ERROR DISPLAY	148	CLOCK NOISE
		119	NO SWITCH-ON FROM STANDBY			139	DISPLAY DIM/TOO DARK	149	CRACKING
		11A	POWERS UP, BUT NO OPERATION			13A	UNUSUAL OR INCORRECT MESSAGE IN DISPLAY	14A	WHISTLING
		11B	CYCLIC POWER ON/OFF					14X	OTHER 'ABNORMAL' NOISE
		11C	BLOWING EXTERNAL (MAINS) FUSE			13B	NO BACKLIGHT		
		11D	SET SWITCHES OFF BY ITSELF			13C	BEEPS, NO DISPLAY		
		11E	BACKUP BATTERY PROBLEM			13D	WARNING LIGHT DOES NOT WORK		
		11F	NOT OPERATING			13E	WARNING LIGHT LIGHTS UP		
		11G	NO AUTOMATIC SWITCH ON/OFF			13X	OTHER 'DISPLAY FUNCTION' PROBLEM		
		11H	PROTECTION SWITCH/FUSE IN SET TRIGGERS						
		11J	RECHARGEABLE BATTERY NOT RECOGNIZED						
		11X	OTHER 'POWER' PROBLEM						
2	COMMUNICATION	210	NO RECEPTION OR CONNECTION	220	POOR RECEPTION OR CONNECTION	230	TRANSMISSION/CONNECTION PROBLEM	240	NOISY RECEPTION/TRANSMISSION
		211	NO AM RECEPTION	221	POOR AM RECEPTION	231	NO TRANSMISSION/CONNECTION	241	LINE NOISE
		212	NO FM RECEPTION	222	POOR FM RECEPTION	232	POOR TRANSMISSION/CONNECTION	242	OSCILLATION
		213	NO SW RECEPTION	223	POOR SW RECEPTION	233	TRANSMISSION LEVEL TOO HIGH	243	INTERSTATION INTERFERENCE
		214	NO VHF RECEPTION	224	POOR VHF RECEPTION	234	NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET	24X	OTHER 'NOISY RECEPTION/TRANSMISSION' PROBLEM
		215	NO UHF RECEPTION	225	POOR UHF RECEPTION				
		216	NO BS RECEPTION	226	POOR BS RECEPTION	235	POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET		
		217	NO CS RECEPTION	227	POOR CS RECEPTION				
		218	NO HDTV RECEPTION	228	POOR HDTV RECEPTION	236	NO IR TRANSMISSION		
		219	NO GPS/QPS RECEPTION	229	POOR GPS/QPS RECEPTION	237	ONE-SIDED CONNECTION		
		21A	NO RECEPTION OF DIGITAL BROADCASTING	22A	POOR RECEPTION OF DIGITAL BROADCASTING	238	MODEM HANGS UP IMMEDIATELY ONCE CONNECTED		
		21B	NO IR RECEPTION	22B	POOR IR RECEPTION	239	MODEM DROPS LINE DURING CONNECTION		
		21C	NO DIAL TONE	22X	OTHER 'POOR RECEPTION' PROBLEM	23X	OTHER 'TRANSMISSION/CONNECTION' PROBLEM		
		21D	NO MODEM/FAX CONNECTION						
		21E	MODEM NOT ANSWERING/NO CARRIER						
		21F	NO NETWORK CONNECTION/NETWORK INITIALIZATION FAILS						
		21X	OTHER 'NO RECEPTION' PROBLEM						
3	PICTURE	310	NO PICTURE	320	PICTURE LEVEL PROBLEM	330	PICTURE QUALITY PROBLEM	340	PICTURE NOISE
		311	NO PICTURE IN E TO E MODE	321	PICTURE TOO DARK	331	POOR PICTURE RESOLUTION	341	SNOWY PICTURE
		312	NO PICTURE IN PLAYBACK MODE	322	PICTURE TOO BRIGHT	332	POOR FOCUS	342	DOT NOISE OR DROPOUT ON PICTURE
		313	NO PICTURE IN VIEWFINDER	323	CONTRAST TOO LOW	333	RINGING ON PICTURE	343	NOISE BARS ON PICTURE
		314	NO PICTURE, ONLY RASTER	324	CONTRAST TOO HIGH	334	EXCESSIVE SMEAR/LAG	344	BLANKING LINES ON PICTURE
		315	NO RASTER, BLACK PICTURE	325	SATURATED WHITE OR BLACK LEVEL	335	POOR LINEARITY OR GEOMETRY	345	BEATING ON PICTURE
		316	ONLY HORIZONTAL LINE	326	SHADING ON PICTURE	336	PICTURE SIZE INCORRECT	346	GHOSTING ON PICTURE
		317	ONLY VERTICAL LINE	327	ONLY PARTIAL PICTURE	337	INCORRECT CENTRING OF PICTURE	347	VCR HEAD SWITCHING NOISE ON PICTURE
		318	NO PICTURE IN LCD	32X	OTHER 'PICTURE LEVEL' PROBLEM	338	PICTURE SLANTED	348	OVERMODULATION NOISE
		319	NO 2nd (OR HIGHER) MONITOR DISPLAY			339	V-SIZE INCORRECT	349	MOIRÉ
		31X	OTHER 'NO PICTURE' PROBLEM			33A	H-SIZE INCORRECT	34A	MOSAIC NOISE
						33X	OTHER 'PICTURE QUALITY' PROBLEM	34B	SCRAMBLED PICTURE
								34X	OTHER 'PICTURE NOISE' PROBLEM
4	COLOUR	410	NO COLOUR	420	COLOUR LEVEL PROBLEM	430	POOR COLOUR QUALITY	440	NOISY COLOUR
		411	NO COLOUR IN E TO E MODE	421	WEAK COLOUR	431	SOME OR ALL COLOURS MISSING	441	COLOUR NOISE ON A BLACK & WHITE PICTURE
		412	NO COLOUR IN PLAYBACK MODE	422	EXCESSIVE COLOUR	432	POOR WHITE BALANCE	442	COLOUR STREAKING
		413	NO COLOUR IN VIEWFINDER	42X	OTHER 'COLOUR LEVEL' PROBLEM	433	HUE PROBLEM	443	COLOUR BARS ON PICTURE
		414	NO COLOUR IN PART OF PICTURE			434	PURITY ERROR	44X	OTHER 'COLOUR NOISE' PROBLEM
		41X	OTHER 'NO COLOUR' PROBLEM			435	LANDING ERROR/WHITE UNIFORMITY		
						436	CONVERGENCE ERROR		
						437	REGISTRATION ERROR		
						438	PITCH MOIRÉ/RAINBOW PATTERN		
						439	COLOUR SHIFT		
						43X	OTHER 'COLOUR QUALITY' PROBLEM		
5	AUDIO	510	NO AUDIO	520	AUDIO LEVEL PROBLEM	530	AUDIO QUALITY	540	NOISY AUDIO
		511	NO SOUND IN E TO E MODE	521	LOW AUDIO LEVEL	531	POOR FREQUENCY RESPONSE	541	HUM
		512	NO PLAYBACK OF OUTGOING MESSAGE(S)	522	EXCESSIVE AUDIO LEVEL	532	DISTORTED AUDIO	542	HISS
		513	NO PLAYBACK OF INCOMING MESSAGE(S)	523	BALANCE PROBLEM	533	NO OR POOR TREBLE	543	CROSSTALK
		514	NO AUDIO PLAYBACK	524	FADER PROBLEM	534	NO OR POOR BASS	544	STATIC, POP OR CLICK NOISE
		515	NO SOUND FROM HANDSET	525	AUDIO LEVEL REMAINING/NO MUTING	535	EARPHONE/HEADPHONE AUDIO POOR	545	BUZZ
		516	NO SOUND FROM SPEAKER	52X	OTHER 'AUDIO LEVEL' PROBLEM	53X	OTHER 'AUDIO QUALITY' PROBLEM	546	SCRATCHING NOISE
		517	NO SOUND FROM EARPHONE/HEADPHONE					547	IGNITION NOISE
		518	NO MICROPHONE SOUND					548	WHISTLING/MULTIPATH NOISE
		519	NO SOUND FROM DIGITAL OUTPUT					549	DATA/DIGITAL NOISE
		51X	OTHER 'NO AUDIO' PROBLEM					54X	OTHER 'AUDIO NOISE' PROBLEM
6	MECHANISM	610	NO MECHANICAL OPERATION	620	IRREGULAR MECHANICAL OPERATION	630	SPEED PROBLEM	640	MECHANICAL NOISE
		611	NO ROTATION OF MOTOR/DISC	621	IRREGULAR ROTATION	631	SPEED TOO FAST	641	ROTATION NOISE/DRUM NOISE
		612	NO FORWARD OPERATION	622	IRREGULAR FORWARD MODE	632	SPEED TOO SLOW	642	MOTOR NOISE
		613	NO REVERSE OPERATION	623	IRREGULAR REVERSE OPERATION	633	SPEED UNADJUSTABLE	643	WIND/AIR NOISE
		614	NO FAST FORWARD OR REWIND FUNCTION	624	IRREGULAR FAST FORWARD OR REWIND FUNCTION	63X	OTHER 'SPEED' PROBLEM	644	SQUEALING
		615	NO LOADING					645	FAN NOISE
		616	NO UNLOADING OR EJECTING	625	IRREGULAR LOADING OF MEDIA			646	DISC SCRAPING
		617	NO AUTO SHUT-OFF OPERATION	626	IRREGULAR UNLOADING OR EJECTING			647	NOISY TAPE LOADING
		618	TONEARM DOES NOT MOVE	627	IRREGULAR AUTO SHUT-OFF OPERATION			648	GEAR NOISE
		619	DISC NOT BEING EJECTED	628	IRREGULAR TONEARM MOVEMENT			649	CONTROL OR SWITCH NOISY
		61A	MAGAZINE OR MODULE LOADING/UNLOADING	629	IRREGULAR EJECTION OF DISC			64A	GRINDING
		61B	CONTROL/SWITCH NOT WORKING	62A	IRREGULAR DIRECTION CHANGE			64B	RUMBLING
		61X	OTHER 'NO MECHANICAL OPERATION' PROBLEM	62B	FAULTY DISC CHANGE OPERATION			64C	VIBRATION NOISE
				62X	OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM			64X	OTHER 'MECHANICAL NOISE' PROBLEM
7	DATA PROCESSING	710	NO DATA PROCESSING OPERATION	720	FAULTY DATA PROCESSING OPERATION	730	DATA DISPLAY PROBLEM	740	KEYBOARD/POINTING DEVICE
		711	NO INITIAL SCREEN	721	INCORRECT DATA	731	INCORRECT CHARACTER DISPLAY	741	MOUSE/TRACKBALL/TRACKPAD NOT WORKING
		712	SYSTEM DOES NOT RESET	722	SYSTEM RESET WHILE BEING USED	732	MISSING DISPLAY CHARACTERS	742	KEYBOARD LOCKS UP
		713	SYSTEM DOES NOT BOOT UP	723	SYSTEM LOCKS OUT/CRASHES/HANGS	733	FAULTY GRAPHIC DISPLAY	743	POINTING DEVICE LOCKS UP
		714	NO OPERATION FROM PLUG-IN MODULE/PERIPHERAL	724	FAULTY OPERATION OF PLUG-IN MODULE	734	FAULTY SWITCHING BETWEEN GRAPHIC/CHARACTER MODE	744	STICKY KEY(S)
		715	NO KEYBOARD OPERATION	725	FAULTY KEYBOARD OPERATION	735	FAULTY PROMPT/CURSOR OPERATION	745	INOPERATIVE KEY(S)
		716	NO OPERATION FROM OTHER INPUT/OUTPUT DEVICE	726	FAULTY OPERATION OF OTHER INPUT/OUTPUT DEVICE	736	DATA DISPLAY COLOUR INCORRECT	746	POINTING DEVICE NOT TRACKING PROPERLY
		717	NO DATA STORAGE OPERATION	727	FAULTY DATA STORAGE OPERATION	737	NO PAGING OR SCROLL MODE	747	POINTING DEVICE JITTERY
		718	NO DATA COMMUNICATION	728	FAULTY DATA COMMUNICATION	73X	OTHER 'DATA DISPLAY' PROBLEM	748	LEFT- OR RIGHT CLICK BUTTON INOPERATIONAL
		719	ERROR MESSAGE DISPLAY	729	MEMORY ERROR			749	TRACKPAD SURFACE DAMAGED
		71A	HDD BOOT FAILURE	72A	REQUIRES 'SET UP' AT BOOTING			74A	KEYBOARD KEY(S) DAMAGED
		71B	FDD BOOT FAILURE	72X	OTHER 'FAULTY DATA PROCESSING' PROBLEM			74X	OTHER KEYBOARD/POINTING DEVICE PROBLEM
		71X	OTHER 'NO DATA PROCESSING' PROBLEM						
8	PRINT/COPY/SCAN	810	NO PRINT/COPY/SCAN OPERATION	820	ERRONEOUS PRINT/COPY/SCAN OPERATION	830	POOR PRINT QUALITY	840	NOISY PRINTING
		811	NOT PRINTING	821	PRINT IMAGE REVERSED (NEGATIVE/POSITIVE)	831	INCORRECT PRINTING POSITION	841	PRINTING NOISE LINES
		812	NO COMMUNICATION WITH PRINTER	822	IRREGULAR PAPER FEED	832	LOW PRINT CONTRAST	842	DIRTY PRINTING
		813	PAPER NOT LOADING	823	ERRONEOUS PRINT MODE SWITCHING	833	EXCESSIVE PRINT CONTRAST	843	UNPLEASANT SMELL (OZONE)
		814	NO PAPER FEED	824	COPY TOO DARK	834	BLURRED PRINT IMAGE	844	BLACK LINES/STRIPES IN FEED DIRECTION
		815	NO IMAGE FIXATION	825	COPY TOO BRIGHT	835	PRINT IMAGE NOT SHARP	845	WHITE LINES/STRIPES IN FEED DIRECTION
		816	NO DOCUMENT FEEDING	826	BLACK COPY	836	DOTS MISSING IN PRINT IMAGE	846	BLACK LINES/STRIPES ACROSS FEED DIRECTION
		817	SCANNER NOT WORKING	827	WHITE COPY	837	COLOUR STREAKING		
		81X	OTHER 'NO PRINT/COPY/SCAN OPERATION PROBLEM'	828	POOR COLOUR LEVELS	838	NO COLOUR IN PART OF PICTURE	847	WHITE LINES/STRIPES ACROSS FEED DIRECTION
				829	IRREGULAR DOCUMENT FEED	839	PRINT IMAGE/COPY INCOMPLETE		
				82A	FAULTY CORRECTION FUNCTION	83A	FAULTY CALIBRATION	84X	OTHER 'NOISY PRINTING' PROBLEM
				82B	POOR SCANNING QUALITY	83X	OTHER 'PRINT QUALITY' PROBLEM		
				82X	OTHER 'PRINT-COPY/SCAN OPERATION' PROBLEM				

SYMPTOM CODE TABLE

EACEM IRIS

5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
150	REMOTE CONTROL PROBLEM	160	PHYSICAL DAMAGE	170	GENERAL FUNCTION PROBLEM	180	SPECIAL REQUIREMENTS
151	NO REMOTE CONTROL OPERATION	161	DAMAGED/DEFORMED CABINET/PANEL	171	FAULTY CLOCK FUNCTION	181	TEST AND CHECK
152	INCORRECT REMOTE CONTROL OPERATION	162	DAMAGED HANDLE/CLIP	172	FAULTY SLEEP FUNCTION	182	GENERAL OVERHAUL
153	REMOTE CONTROL PROGRAMMING/LEARNING MODE PROBLEM	163	DAMAGED CONTROL KNOB(S)/BUTTON(S)/KEYPAD	173	FAULTY TIMER PROGRAMMING	183	SYSTEM/FREQUENCY CONVERSION
154	POOR REMOTE CONTROL SENSITIVITY	164	DAMAGED DOOR/COVER	174	FAULTY TIMER OPERATION	184	INITIAL SETUP/INSTALLATION REQUESTED
15X	OTHER 'REMOTE CONTROL' PROBLEM	165	DAMAGED SEAL	175	PROGRAMMING/USER ADJUSTMENT PROBLEM	185	MODIFICATION/CIRCUIT/INSTALLATION CHANGE
		166	DAMAGED PLUG/SOCKET/TERMINAL/CONNECTOR	176	FAULTY RECORD MUTE OPERATION	186	WRONG PRODUCT IN CARTON
		167	DAMAGED LENS	177	FAULTY PROGRAMMED PLAYBACK OPERATION	187	ACCESSORY MISSING
		168	DAMAGED CARTRIDGE OR STYLUS	178	FAULTY MEMORY FUNCTION	188	UNABLE TO CONNECT PARTS-TO ASSEMBLE
		169	DAMAGED ANTENNA	179	FAULTY INPUT SWITCHING		
		16A	DAMAGED CRT OR VIEWFINDER/LCD DISPLAY	17A	FAULTY OUTPUT SWITCHING	189	WRONG COLOUR
		16B	MISSING COMPONENT(S) OR ORNAMENTAL PARTS	17B	ELECTRIC SHOCK/STATIC DISCHARGE	18B	BATTERY MOUNTING PROBLEM
		16C	PRINTED MARKINGS ERASED/PEELED OFF	17C	FAULTY SEARCH FUNCTION (INDEX/VIEW/TITLE/CHAPTER/TRACK...)	18X	OTHER SPECIAL REQUIREMENTS
		16D	SET BURNING/EMITS SMOKE	17D	WRONG LANGUAGE/CHARACTER SET	18Z	SYMPTOM NOT AVAILABLE
		16E	EXTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED)	17E	ERROR CODE APPEARS IN DISPLAY		
		16F	SMELL	17F	SWITCH NOT OPERATING		
		16G	WEAK/DAMAGED STAND	17G	PEDAL NOT OPERATING		
		16H	DAMAGED SPEAKER	17H	FAULTY STANDBY MODE		
		16J	SET GETS VERY HOT / PARTS MELTING	17J	FAULTY HIBERNATION MODE		
		16K	FOREIGN SUBSTANCE ON/IN UNIT	17K	NO AUDIBLE WARNING SIGNAL		
		16L	BURNING MARKS	17L	FAULTY OPERATION OF PARENTAL LOCK/KEYLOCK FUNCTION		
		16M	INTERNAL SURFACE DAMAGE (BUBBLING/PEELING/RUSTING/SCRATCHED)	17M	FAULTY MODE SWITCHING		
		16N	DAMAGED POWER CABLE	17N	MENU FUNCTION PROBLEM		
		16P	DAMAGED ACCESSORY	17X	OTHER 'GENERAL FUNCTION' PROBLEM		
		16R	DISCOLOURATION				
		16X	OTHER PHYSICAL DAMAGE				
250	UNSTABLE RECEPTION/TRANSMISSION	260	TUNING PROBLEM	270	SPECIAL COMMUNICATION PROBLEM	280	SPECIAL RECEPTION PROBLEM
251	TUNING DRIFT	261	MANUAL TUNING PROBLEM	271	FAULTY DIALLING	281	FAULTY STEREO RECEPTION
252	FADING	262	AUTOMATIC TUNING PROBLEM	272	FAULTY CHANNEL SELECTION	282	FAULTY MAIN CHANNEL (A) FUNCTION
253	INTERMITTENT LINE/LINE BREAKING OFF	263	INCORRECT TUNING	273	FAULTY AUTO-ANSWER OPERATION	283	FAULTY SUB-CHANNEL (B) FUNCTION
254	NO OR UNSTABLE CONNECTION COMBINED WITH 'WEAK SIGNAL STRENGTH' INDICATION	264	TUNING MEMORY PROBLEM	274	FAULTY MESSAGE READ-OUT FUNCTION	284	FAULTY SSB RECEPTION
		26X	OTHER 'TUNING' PROBLEM	275	FAULTY AUTODIAL/REDIAL MEMORY	285	FAULTY RDS/VPS/PDC/XDS OPERATION
25X	OTHER 'UNSTABLE RECEPTION/TRANSMISSION' PROBLEM			276	FAULTY SPEECH PROCESSING	286	FAULTY TELETEXT/CLOSE CAPTION/EPG RECEPTION
				277	NO RINGING TONE		
				278	LOUD/WEAK RINGING TONE	287	FAULTY SATELLITE/RTTY RECEPTION
				279	MODEM STUCK OFF HOOK	288	FAULTY FAX OPERATION
				27A	FAX DOES NOT WORK PROPERLY	289	MODEM NOT RECOGNIZED BY SYSTEM
				27B	MODEM CAUSES PROBLEM WITH PHONE	28A	FAULTY CALL CHARGE DISPLAY
				27C	NO MODEM DIAL TONE	28B	FAULTY HANDS-FREE OPERATION
				27X	OTHER 'SPECIAL COMMUNICATION' PROBLEM	28C	SET LOCKED
						28X	OTHER 'SPECIAL RECEPTION' PROBLEM
350	UNSTABLE PICTURE	360	POOR PICTURE RECORDING	370	SPECIAL PICTURE FUNCTION PROBLEM	380	PICTURE DISPLAY/PICKUP PROBLEM
351	SYNC PROBLEM	361	NO PICTURE RECORDING	371	EDITING PROBLEM	381	BURN MARK ON DISPLAY/PICKUP
352	PICTURE PUMPING	362	NO ERASURE PROTECTION FOR VIDEO	372	FAULTY FADING/WIPER OPERATION	382	SCRATCH ON DISPLAY/PICKUP
353	PICTURE JITTER	363	PREVIOUS VIDEO RECORDING NOT BEING ERASED	373	FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION	383	DUST/DIRT ON DISPLAY/PICKUP
354	PICTURE SHAKING (HORIZONTAL OR VERTICAL)	364	UNWANTED ERASURE OF PICTURE	374	FAULTY SUPERIMPOSS/TELOP OPERATION	384	PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP
		365	NO CAMERA RECORDING	375	FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION		
355	FLICKERING PICTURE	366	ONLY ONE FIELD PER FRAME BEING RECORDED	376	FAULTY PICTURE TRANSMISSION	385	BRIGHT POINT(S) IN PHOSPHOR/PIXEL
356	FLASHING PICTURE	367	RECORDS ONLY A FEW PICTURES	377	FAULTY DIGITAL SHUTTER FUNCTION	386	LINES ACROSS/DOWN IMAGE
357	CYCLIC PICTURE MUTING	36X	OTHER 'PICTURE RECORDING' PROBLEM	378	FAULTY GENLOCK FUNCTION	387	OUT OF SPECS PIXEL DEFAULTS
358	HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE			379	FAULTY FLASH/STROBE FUNCTION	388	BACKGROUND BURNT IN
				37A	FAULTY DIGITAL PICTURE/ZOOMING FUNCTION	38X	OTHER 'PICTURE DISPLAY/PICKUP' PROBLEM
359	VCR SKEW/H-SHIFT ERROR			37B	FAULTY AUTO-EDIT FUNCTION		
35A	FROZEN PICTURE			37C	FAULTY PICTURE STABILIZER FUNCTION		
35B	JUMPING/REPEATING PICTURE			37D	FAULTY PICTURE CAPTURE FUNCTION		
35X	OTHER 'UNSTABLE PICTURE' PROBLEM			37E	FAULTY SUBTITLING FUNCTION		
				37F	FAULTY VARIABLE SPEED PLAYBACK		
				37G	FAULTY VIEW-/MULTI-ANGLE SWITCHING		
				37H	FAULTY ASPECT RATIO SWITCHING		
				37J	THUMBNAIL- OR INDEX PICTURE PROBLEM		
				37K	NO BLANKING SCREEN		
				37X	OTHER 'SPECIAL PICTURE FUNCTION' PROBLEM		
450	UNSTABLE COLOUR	460	POOR COLOUR RECORDING	470	SPECIAL COLOUR FUNCTION PROBLEM	480	
451	COLOUR FLASHING	461	NO COLOUR RECORDING	471	FAULTY AUTOMATIC WHITE BALANCE		
452	HUE CONSTANTLY CHANGING	462	NOISY COLOUR RECORDING	472	FAULTY COLOUR EFFECTS FUNCTION		
453	FLICKERING COLOUR	46X	OTHER 'COLOUR RECORDING' PROBLEM	47X	OTHER 'SPECIAL COLOUR FUNCTION" PROBLEM		
454	COLOUR NOT LOCKED						
45X	OTHER 'UNSTABLE COLOUR' PROBLEM						
550	UNSTABLE AUDIO	560	POOR AUDIO RECORDING	570	POOR SPECIAL AUDIO FUNCTION	580	STEREO/MULTI MODE OPERATION PROBLEM
551	JUMPING OR REPEATING AUDIO	561	AUDIO NOT BEING RECORDED	571	FAULTY FADE OPERATION	581	NO STEREO OPERATION
552	AUDIO PUMPING OR BREATHING	562	NO ERASURE PROTECTION FOR AUDIO	572	FAULTY ECHO OPERATION	582	POOR CHANNEL SEPARATION
553	AUDIO DROPOUTS	563	PREVIOUS AUDIO RECORDING NOT BEING ERASED	573	FAULTY MIXING OPERATION	583	DIFFERENCE IN PHASE BETWEEN CHANNELS
554	CYCLIC AUDIO MUTING	564	UNWANTED ERASURE OF AUDIO	574	FAULTY REPEAT MODE OPERATION		
555	WOW AND FLUTTER	565	MESSAGE NOT BEING RECORDED	575	FAULTY AUDIO PROCESSING	584	PROBLEM WITH SURROUND SOUND MODE
556	HOWLING/ACOUSTIC FEEDBACK	566	DISTORTED AUDIO RECORDING	576	FAULTY SYNC RECORDING OPERATION	585	PROBLEM WITH PCM AUDIO MODE
557	ECHO IN SOUND	56X	OTHER 'AUDIO RECORDING' PROBLEM	577	FAULTY DBB/DOL OPERATION	58X	OTHER 'STEREO/MULTI MODE' PROBLEM
55X	OTHER 'UNSTABLE AUDIO' PROBLEM			578	FAULTY NOISE REDUCTION OPERATION		
				579	FAULTY AUDIO DUB FUNCTION		
				57A	FAULTY TITLE PROGRAMMING		
				57B	FAULTY MIC CONTROL		
				57C	FAULTY PITCH CONTROL		
				57X	OTHER 'SPECIAL AUDIO FUNCTION' PROBLEM		
650	MECHANICAL INSTABILITY	660	DAMAGE TO MEDIA	670	MECHANICAL OPERATION PROBLEM	680	LENS PROBLEM
651	UNEVEN FEET	661	TAPE GETS SCRATCHED	671	FAULTY START/STOP OPERATION	681	FOCUS PROBLEM
652	FAULTY HINGE	662	DISC GETS SCRATCHED	672	FAULTY PAUSE OPERATION	682	ZOOM PROBLEM
653	VIBRATING/JUMPING	663	TAPE GETS CHEWED/WRINKLED	673	FAULTY AUTOMATIC PROGRAM SEARCH	683	IRIS PROBLEM
654	PARTS LOOSE	664	TAPE JAMMED OR BROKEN	674	FAULTY CUE/REVIEW MODE	684	MACRO PROBLEM
655	DAMAGED WHEEL(S)	665	TAPE GETS CURLED	675	FAULTY SLOW MOTION OPERATION	68X	OTHER 'LENS' PROBLEM
65X	OTHER 'MECHANICAL INSTABILITY' PROBLEM	666	SLACK TAPE	676	FAULTY HIGH-SPEED SCANNING MODE		
		667	TAPE STICKING	677	FAULTY SPEED COPY FUNCTION		
		66X	OTHER 'SOFTWARE DAMAGE' PROBLEM	678	FAULTY REPEAT OPERATION		
				679	FAULTY RECORD REVIEW MODE		
				67A	FAULTY AMS OPERATION		
				67B	AUTO-REVERSE MALFUNCTION		
				67C	FAULTY END DETECTION		
				67D	FAULTY DISC SIDE (A-B SELECT) SWITCHING		
				67X	OTHER 'MECHANICAL OPERATION' PROBLEM		
750	PERIPHERAL PROBLEM (NON-STORAGE)	760	DATA STORAGE PROBLEM	770	SPECIAL DATA PROCESSING FUNCTION PROBLEM	780	INTERFACE PROBLEM
751	PERIPHERAL DOES NOT INITIALISE	761	FORMATTING PROBLEM	771	FAULTY SELF-DIAGNOSTIC MODE	781	USB INTERFACE PROBLEM
752	COMMUNICATION FAILURE WITH PERIPHERAL	762	DATA ON STORAGE MEDIUM BEING LOST	772	FAULTY WORD PROCESSING FUNCTION	782	PARALLEL INTERFACE PROBLEM
753	INTERNAL PERIPHERALS FAILURE	763	FRAME MEMORY PROBLEM	773	FAULTY GRAPHIC EDIT FUNCTION	783	SCSI INTERFACE PROBLEM
754	EXTERNAL PERIPHERALS FAILURE	764	READ/WRITE ERRORS	774	PROGRAM CANNOT BE INSTALLED	784	SERIAL INTERFACE PROBLEM
755	NETWORK CARD ERROR	765	HARD- OR OPTICAL DRIVE PROBLEM	775	PRE-LOADED PROGRAM CANNOT BE STARTED UP	785	INCOMPATIBLE WITH OTHER SYSTEMS
756	PERIPHERAL FAILS SELF TEST	766	FLOPPY DRIVE PROBLEM	776	NOT PRE-LOADED PROGRAM CANNOT BE STARTED UP	786	AUDIO/VIDEO INTERFACE PROBLEM
75X	OTHER PERIPHERAL PROBLEM	767	CD/DVD-RO

EACEM - SECTION CODES

COMMON	
ANT	ANTENNA SECTION
APR	SIGNAL PROCESSING (ANALOG)
BCH	BATTERY CHARGE
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CTR	CONTROL PANEL
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
FLX	FLEXIBLE PRINTED CIRCUIT BOARD
HFS	HIGH FREQUENCY SECTION (RF)
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
ILN	i.LINK (IEEE1394) SECTION
INP	SIGNAL INPUT SECTION
IRD	INFRARED (IrDA) SECTION
MEM	MEMORY CIRCUIT
OUT	SIGNAL OUTPUT SECTION
PRG	PROGRAMMING SECTION
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFU	BOOSTER,RF UNIT
SFT	SOFTWARE (TAPE, DISC, ETC.)
SNS	SENSOR UNIT
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING

SOUND-RELATED	
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
CDC	CD CHANGER SECTION
CDS	CD SECTION
MDC	MD CHANGER SECTION
MDS	MINIDISC SECTION
MIC	MICROPHONE SECTION
PUD	PICK-UP DEVICE
SHD	STATIONARY HEAD(S)
SPK	SPEAKER

PICTURE-RELATED	
CAM	CAMERA CIRCUIT
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
DFL	DEFLECTION CIRCUIT
DVD	DVD SECTION
FPK	FOCUS PACK
IMG	IMAGE DISPLAY UNIT

PICTURE-RELATED	
LCD	LCD SECTION
LMP	LAMP/FLASH SECTION
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER

PC-RELATED	
FDD	FLOPPY DISC DRIVE
FMW	FIRMWARE
HDD	HARD DISC DRIVE
ISA	ISA SECTION
JST	JOYSTICK
KBD	KEYBOARD (SEPARATE)
MDM	MODEM SECTION
NIF	NETWORK INTERFACE
PAR	PARALLEL PORT
PCC	PC CARD
PCI	PCI SECTION
SCS	SCSI PORT
SER	SERIAL PORT
USB	USB PORT

MECHANICAL	
ARM	ARM MECHANISM
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
DDM	DISC DRIVE MECHANISM
EXC	EXTERNAL CONNECTOR
HCM	HEAD CARRIAGE MECHANISM
HOL	CASSETTE HOLDER
INC	INTERNAL CONNECTOR
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRI	PRINT BLOCK
RFM	RIBBON FEED MECHANISM
RHD	ROTARY HEAD(S)
SLD	SLED MECHANISM
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

EXAMPLE OF USE:

FLAG	SYMPTOM CODE	PART NO.	REF. NO.	SECTION	PCB	DEFECT CODE	REPAIR CODE	QTY
1	1412	1111111111111111111	R123....	TDM	YA22...	C1	Z1	..
.	3641	3456789XXXXXXXXXXX	111.....					..

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

DEFECT CODES

MECHANICAL	
A	WORN OUT (OR GENERAL MECHANICAL DEFECT)
A1	MISOPERATING
B	DIRTY, CLOGGED
C	MECHANICALLY MISALIGNED
D	CUT, BROKEN
E	DEFORMED
F	SNAPPED
G	SCRATCHED, DENTED, SHARP EDGES
H	CRACKED, PEELED, CORRODED, MELTED
I	LOOSE/OFF/STRIPPED
J	SHAKY, UNSTABLE
K	LEAKING (MECHANICAL)
L	DRY (NO LUBRICANT)
M	FOREIGN OBJECT

ELECTRICAL	
N	DEFECTIVE ELECTRICAL COMPONENT/MODULE
O	BURNT, ARCING, MISSING PIXELS
P	ELECTRICALLY MISALIGNED/WRONG SETTING
Q	SHORT CIRCUIT
R	OPEN CIRCUIT
S	LEAKING (ELECTRICAL)
T	BAD CONTACT, CONNECTION
T1	BAD EARTH CONNECTION
U	OPEN PATTERN
V	CRACKED PRINTED CIRCUIT BOARD
W	COLD OR NO SOLDERING
X	BRIDGED SOLDERING
Y	WRONG COMPONENT/MODULE
Z	MISSING COMPONENT/MODULE
1	SOFTWARE PROBLEM
11	LOSING DATA FROM MEMORY
12	FAULTY PROGRAM SETTING/INSTALLATION
13	SOFTWARE DEFECTIVE OR INCOMPLETE
14	SOFTWARE SETUP PROBLEM
15	NO IDENTIFICATION / AUTHENTICATION OF PRODUCT OR USER
2	EXHAUSTED, LOW EMISSION
3	NO PROBLEM FOUND (SET WITHIN SPEC)
4	NO PROBLEM FOUND - CUSTOMER MISUNDERSTANDING
5	NO PROBLEM FOUND - LOCAL CONDITIONS
51	FAULTY MAINS VOLTAGE
6	UNABLE TO DIAGNOSE FAULT
7	INCORRECTLY WIRED/ASSEMBLED
81	INCORRECT EQUIPMENT CONNECTION
9	CUSTOMER MISUSE
93	UNAUTHORISED MODIFICATION

REPAIR CODES

A	REPLACEMENT
B	MECHANICAL ALIGNMENT
C	ELECTRICAL ALIGNMENT
D	RESOLDERING
D1	REFITTING, PUT BACK IN POSITION (CONNECTOR, TUBE...)
E	CLEANING
F	LUBRICATION
G	REPAIRED ELECTRICAL PARTS
H	REPAIRED MECHANICAL PARTS
I	MODIFICATION REQUESTED BY MANUFACTURER
J	REMOVED
K	ADDED
L	FUNCTIONAL CHECK
M	SPECIFICATION MEASUREMENT
N	MAINTENANCE
O	REFURBISHING, RECONDITIONING
P	PREVENTIVE PARTS REPLACEMENT

Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
U	EXPLANATION FOR CUSTOMER
V	COST ESTIMATION REFUSED
W	COST ESTIMATION WITH PARTS
X	COST ESTIMATION WITHOUT PARTS
Y	RETURN WITHOUT REPAIR
Z	PRODUCT EXCHANGE
Z1	PRODUCT EXCHANGE (REPAIR TOO EXPENSIVE)
Z2	PRODUCT EXCHANGE (TOO MANY VISITS/REPAIRS)
Z3	PRODUCT EXCHANGE (PARTS NOT AVAILABLE)
Z4	PRODUCT EXCHANGE (IMPOSSIBLE TO REPAIR)
Z5	PRODUCT EXCHANGE (ON REQUEST OF RETAILER)
Z6	PRODUCT EXCHANGE (ON REQUEST OF MANUFACTURER)
1	SOFTWARE CORRECTION/RESET
2	SOFTWARE UPGRADE
3	PRODUCT UPGRADE (ON REQUEST)

REV 03 - 2000/02
9-948-441-10

ERROR CODES

(EN)

10 Used to display child lock mode
11 Used to display timer mode
12 Audio MSP341X doesn't answer anymore
13 The tuner doesn't answer anymore
14 TDA9330 (HOP) doesn't answer anymore or +8V not available
15 FI tuner doesn't answer anymore
16 VSP 9402 (IU100) doesn't answer anymore
17 I2C Bus_1 data line held low
18 I2C Bus_1 clock line held low
20 Bus access is prohibited for SW
21 I2C Bus_2 data line held low
23 I2C Bus 2 clock line held low
25 Switched 5V not available
26 Tube gets not warm in time (Icut signal no correct)
27 Deflection problem. Deflection detects >3 times prot.
31 Keyboard decoder problem (SW pointer problem)
32 Keyboard decoder problem (A SW- timer has been request but isn't available yet)
34 The NVM chip doesn't answer anymore
35 The voltage +5V not available
36 Wrong address passed to the bus-handler
37 Unexpected level on NMI line found
38 There is no RAM for the requested operation
42 The POR bit of the Primus can't be reset
43 Power down detection TDA9330 (HOP)
44 NRF bit problem. TDA9330 (HOP) oscillator not locked
45 FLS bit problem on safety circuits of TDA9330 (HOP)
46 NHF bit problem (horizontal flyback) on the PHI2_REF of TDA9330 (HOP)
47 NDF bit problem on the vertical part of TDA9330 (HOP)

(FR)

10 Utilisation de la clef enfant
11 Utilisation du mode réveil
12 Audio MSP341X ne répond pas
13 Le tuner ne réponsd pas
14 Déviation: TDA9330 (HOP) ne répons pas ou le +8V n'est pas présent.
15 FI tuner ne réond pas
16 VSP 9402 ne répons pas (IU100)
17 I2C bus_1 data est au niveau bas
18 I2C bus_1 clock est au niveau bas
20 Pas d'accès au bus
21 I2C bus_2 data est au niveau bas
23 I2C bus 2 clock est au niveau bas
25 5V commuté absent
26 Tube froid (signal Icut non conforme)
27 Problème de balayage (après 3 tentatives)
31 Problème de décodage clavier
32 Problème de décodage clavier
34 La mémoire NVRAM ne répond pas
35 La tension 5V n'est pas disponible
36 Problème d'adressage sur le bus
37 Anomalie sur interruption non masquable
38 Pas de mémoire RAM disponible pour effectuer les opérations
42 Problème de Reset sur le Primus
43 Le HOP (TDA9330) détecte un arrêt
44 Problème sur l'oscillateur du TDA9330 (HOP)
45 Problème sur les circuits de sécurité du TDA9330 (HOP)
46 Problème sur le PHI2_REF du TDA9330 (HOP
47 Problème sur la partie trame du TDA9330 (HOP)

(DE)

10 Kindersicherung aktiv (Kein Fehlercode!)
11 Weckerfunktion aktiv (Kein Fehlercode !)
12 Audio-MSP 341x antwortet nicht
13 Tuner antwortet nicht
14 TDA9330H antwortet nicht (oder +8V fehlen)
15 FI-Tuner antwortet nicht
16 VSP9402 (IU100) antwortet nicht
17 I2C Bus_1 Data ist immer L
18 I2C Bus_1 Clock ist immer L
20 I2C Bus ist blockiert
21 I2C Bus_2 Data ist immer L
23 I2C Bus_2 Clock ist immer L
25 Geschaltete 5V nicht vorhanden
26 Bildrohr ist nicht rechtzeitig aufgeheizt (Signal Icut nicht korrekt)
27 Schutzschaltung Ablenkung hat dreimal ausgelöst
31 Softwarefehler Tastatur-Decoder (nur für Produktionsstätten)
32 Softwarefehler Tastatur-Decoder (nur für Produktionsstätten)
34 NVM (EEPROM) antwortet nicht
35 5V nicht vorhanden (Netzspannung zu niedrig/Power-Fail-Schaltung)
36 Softwarefehler (nur für Produktionsstätten)
37 Unerwarteter Zustand auf NMI-Leitung (z.B. durch Überschlag im Bildrohr)
38 Softwarefehler (nur für Produktionsstätten)
42 POR (Power On Reset) Flag VSP9402 wird nicht zurückgesetzt (zu geringe Betriebsspannung)
43 Power Down Detection TDA9330H (zu geringe Betriebsspannung)
44 NRF Flag TDA9330H Referenz-PLL (Clock) nicht eingerastet
45 FLS Flag TDA9330H Pin 5 ('FLASH')>2V, Ablenkschutzschaltung aktiv
46 NHF Flag TDA9330H Pin 13 H-Rückschlagimpuls fehlt
47 NDF Flag TDA9330H Pin 9 V_GUARD fehlt oder dauert zu lange

(IT)

10 Usato per visualizzare la sicurezza bambini
11 Usato per visualizzare il modo timer
12 L'integrato audio MSP341X non risponde
13 Il tuner non risponde
14 Il TDA9330 (HOP) non risponde oppure +8V non disponibili
15 La FI tuner non risponde
16 Il VSP9402 (IU100) non risponde
17 IICBus_1 con linea data a livello basso
18 IICBus_1 con linea clock a livello basso
20 Accesso Bus è vietato dal software
21 IICBus_2 linea data a livello basso
23 IICBus_2 linea clock a livello basso
25 5V commutati non disponibili
26 Il tubo non raggiunge la temperatura nel tempo stabilito (segnale Icut non corretto)
27 Problema di deflessione. Deflessione rlieva > 3 volte prot.
31 Problema decoder tastiera (problema SW pointer)
32 Problema decoder tastiera (A SW- timer è stato richiesto ma non ancora disponibile)
34 L'NVM chip non risponde
35 Tensione +5V non disponibile
36 Indirizzo errato trasmesso al sistema bus
37 Livello incorretto sulla linea MNI
38 Non disponibilità della RAM per l'operazione richiesa
42 IL bit POR del Primus non può essere resettato
43 Caduta di tensione di alimentazione del TDA9330(HOP)
44 Problema con il bit NRF. TDA9330 (HOP) con problema sull'oscillatore
45 Problema con il bit FLS sul circuito protezione del TDA9330(HOP)
46 Problema con il bit NHF (Horizontal flyback) sulla PHI2_REF del TDA9330 (HOP)
47 Problema con il bit NDF della parte verticale del TDA9330 (HOP).

(ES)

10 Utilizado para indicar el modo "seguro niños"
11 Utilizado para indicar el modo "timer"
12 El circuito de audio MSP341X no responde
13 El sintonizador no responde
14 TDA9330 (HOP) no responde o faltan los +8V
15 La F.I. no responde
16 VSP 9402 (IU100) no responde
17 La línea de datos de I2C Bus_1 forzada a nivel bajo
18 La línea de clock de I2C Bus_1 forzada a nivel bajo
20 Acceso al Bus prohibido para el software
21 La línea de datos de I2C Bus_2 forzada a nivel bajo
23 La línea de clock de I2C Bus_2 forzada a nivel bajo
25 Los 5V conmutados no disponibles
26 El TRC no se calienta en el tiempo establecido (señal Icut incorrecta)
27 Problema de deflexión. Disparada la protección más de 3 veces
28 STV2050 no responde
29 Fallo de convergencia. NVM24C32 no responde
31 Problema de teclado (problema de SW, puntero)
32 Problema de teclado (un timer ha sido solicitado pero no está disponible)
34 La NVM no responde
35 La tensión de +5V no existe
36 Dirección incorrecta al controlador de bus
37 Encontrado un nivel inesperado en la línea NMI
38 No RAM para la operación solicitada
42 El bit POR del Primus no puede ser inicializado
43 TDA9330 (HOP) detecta "apagado"
44 Problema del bit NRF. TDA9330 (HOP) oscilador no fijado
45 Problema con el bit FLS en los circuitos de seguridad de TDA9330 (HOP)
46 Problema con el bit NHF (horizontal flyback) en PHI2_REF de TDA9330 (HOP)
47 Problema en el bit NDF en la parte del vertical de TDA9330 (HOP)

WARNING : *Before servicing this chassis read the safety recommendations.*

ATTENTION : *Avant toute intervention sur ce châssis, lire les recommandations de sécurité.*

ACHTUNG : *Vor jedem Eingriff auf diesem Chassis, die Sicherheitsvorschriften lesen.*

ATTENZIONE : *Prima di intervenire sullo chassis, leggere le norme di sicurezza.*

IMPORTANTE : *Antes de cualquier intervención, leer las recomendaciones de seguridad.*

Do not disconnect modules when they are enregized! Repairs on power supply section are to be carried out only with isolating transformer.

Ne pas retirer les modules lorsqu'ils sont sous tension. N'effectuer les travaux de maintenance sur la partie reliée au secteur (Switch Mode) qu'au travers d'un transformateur d'isolement.

Module nicht bei eingeschaltetem Gerät entfernen ! Servicearbeiten am Netzteil nur unter Verwendung eines Regeltrenntrafos durchführen.

Non scollegare i moduli quando sono alimentati! Intraprendere riparazioni sulla sezione alimentatore solo con trasformatore isolante.

No desconectar los módulos cuando están activados. Las reparaciones en la sección de alimentación de energía deben ser ejecutadas solamente con un transformador de separación.

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil. Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol⚠ gekennzeichnet) nicht durch Original - Ersatzteile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (marcati con il segno⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio. In tal caso è "esclusa la responsabilità " del costruttore.

La sustitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato. En ese caso, el fabricante cesa de ser responsable.

Note : During measurements in the power supply unit, use the primary power unit ground (Emit. TP060).

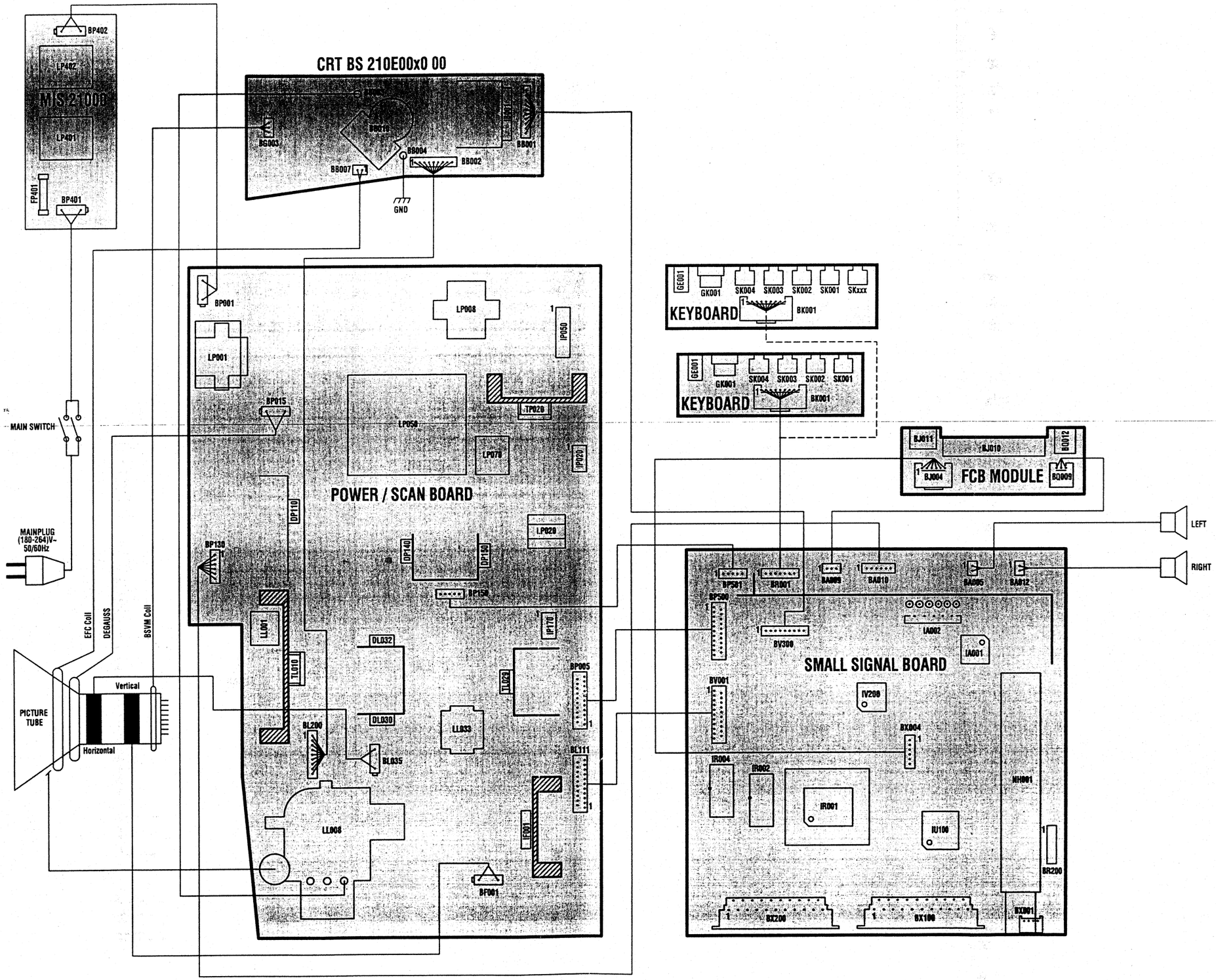
Attention : Mesures dans le bloc alimentation. Utiliser la masse du bloc alimentation (Emet. TP060).

Achtung : Bei Messungen im Primärnetzteil. Primärnetzteilmasse verwenden (Emit. TP060).

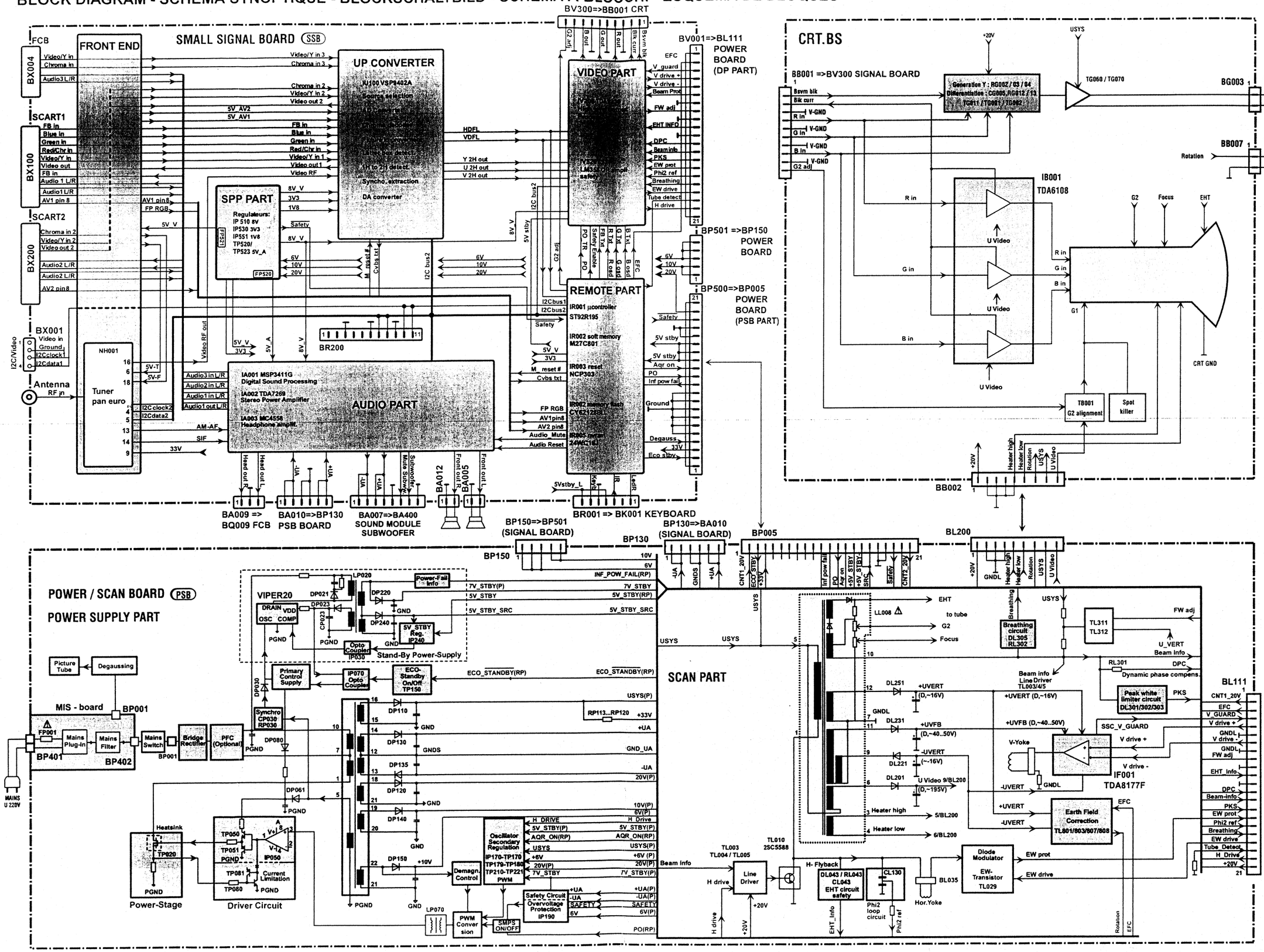
Attentionze : Misure nell'alimentatore primario. Usare massa alimentazione primario (Emet. TP060).

Cuidado : Medida en el bloque de alimentación. Utilizar la masa del bloque de alimentación (Emet. TP060).

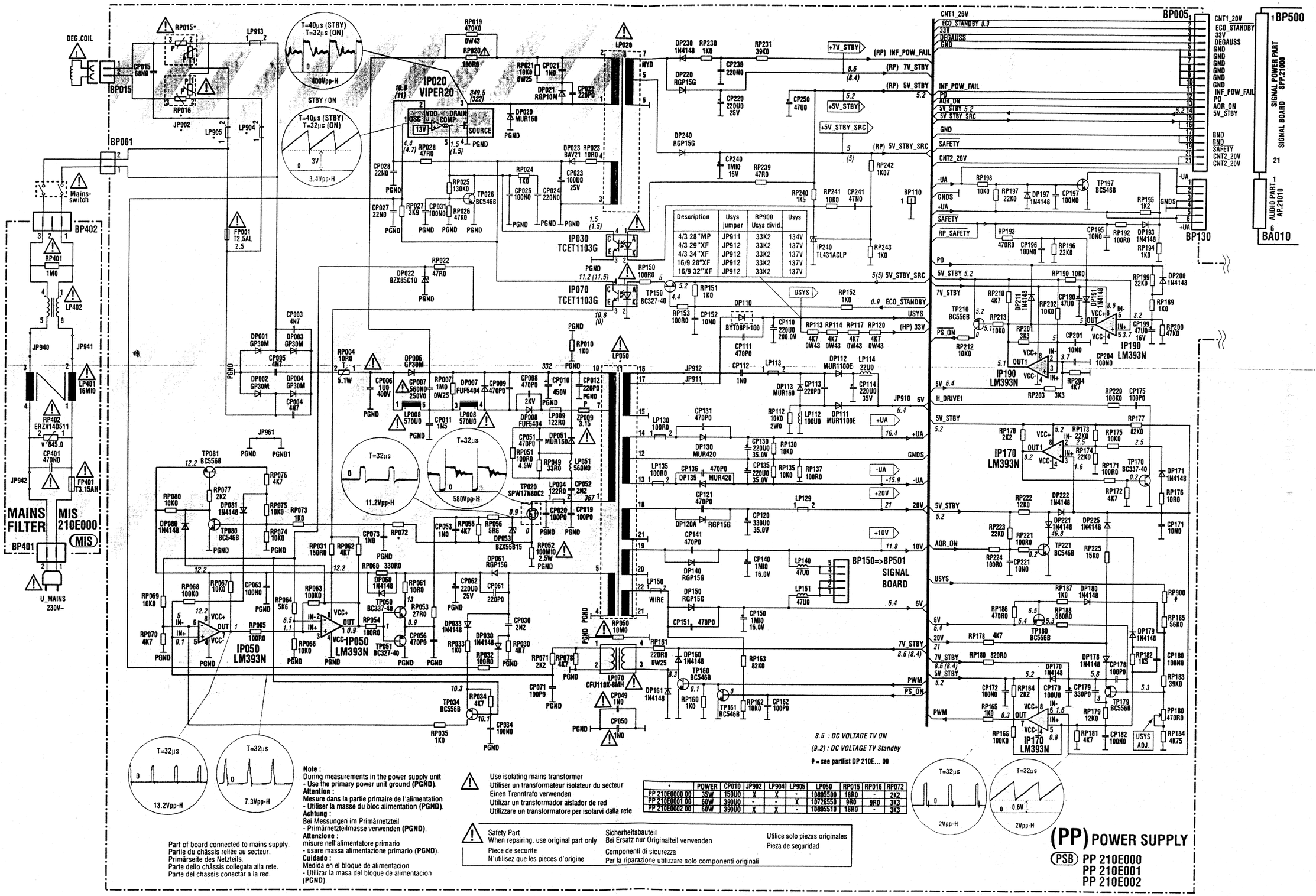
WIRING DIAGRAM - SCHEMA D'INTERCONNEXIONS - VERDRAHTUNGSPLAN - DIAGRAMMA DELLE INTERCONNESSIONI - ESQUEMA DE INTERCONEXIONES



BLOCK DIAGRAM - SCHEMA SYNOPTIQUE - BLOCKSCHALTBILD - SCHEMA A BLOCCHI - ESQUEMA DE BLOQUES



COMPLETE PCB DIAGRAM - SCHEMA PLATINE PRINCIPALE EQUIPEE - SCHALTUNG LEITERPLATTE KPL - SCHEMA PIASTRA COMPLETA - ESQUEMA PLATINA EQUIPADA
POWER SUPPLY PART - PARTIE ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN



Description	Usys jumper	RP900 Usys divid.	Usys
4/3 28"MP	JP911	33K2	134V
4/3 29"XF	JP912	33K2	137V
4/3 34"XF	JP912	33K2	137V
16/9 28"XF	JP912	33K2	137V
16/9 32"XF	JP912	33K2	137V

*	POWER	CP010	JP902	LP904	LP905	LP050	RP015	RP016	RP072
PP 210E0000 00	35W	150U0	X	X	-	10805500	18R0	-	2K2
PP 210E0001 00	60W	390U0	-	-	X	10726550	9R0	9R0	3K3
PP 210E0002 00	60W	390U0	X	X	-	10805510	18R0	-	3K3

8.5 : DC VOLTAGE TV ON
(9.2) : DC VOLTAGE TV Standby
* = see partlist DP 210E... 00

Note :
During measurements in the power supply unit
- Use the primary power unit ground **(PGND)**.

Attention :
Mesure dans la partie primaire de l'alimentation
- Utiliser la masse du bloc alimentation **(PGND)**.

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden **(PGND)**.

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario **(PGND)**.

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion **(PGND)**.

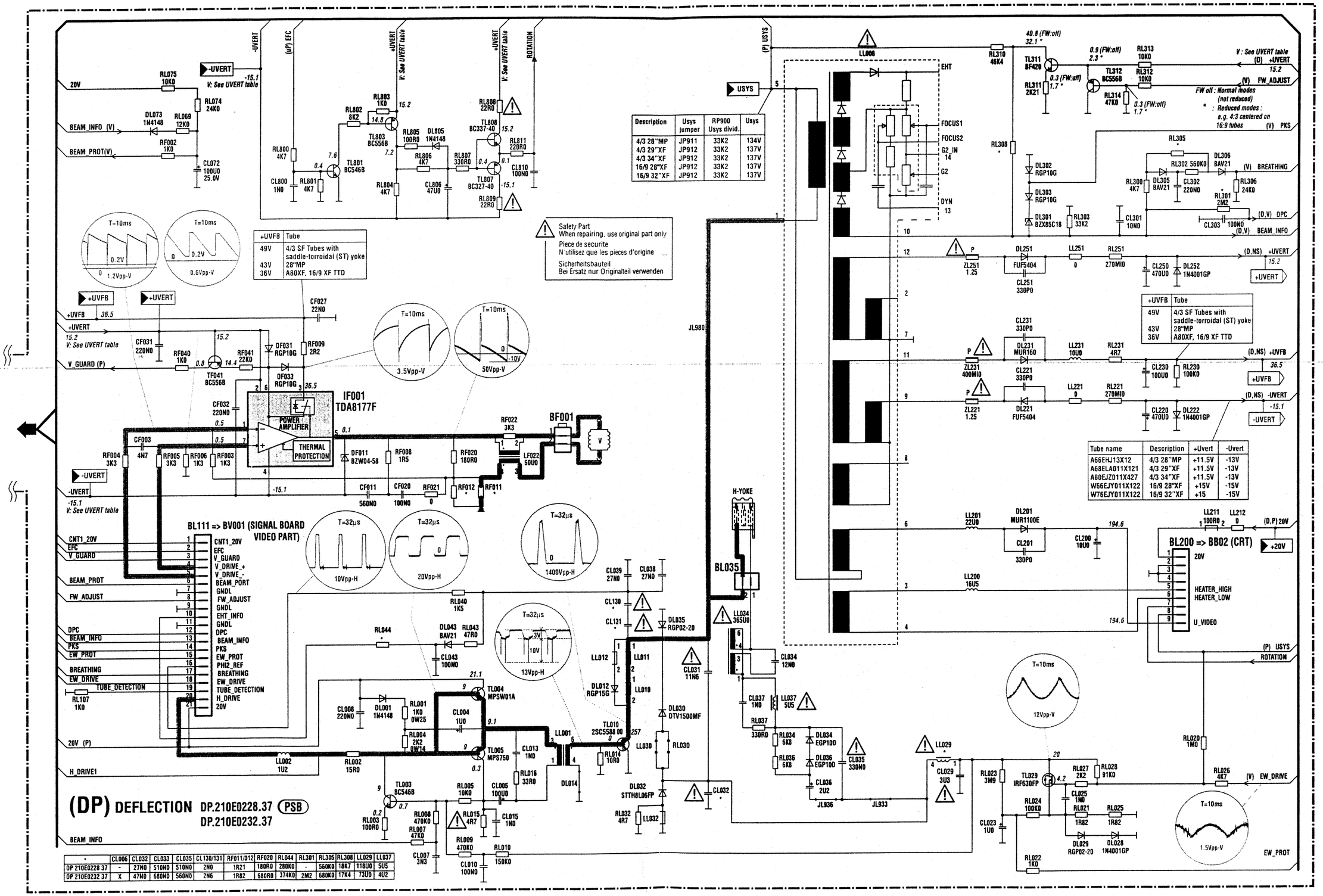
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

Use isolating mains transformer
Utiliser un transformateur isolateur du secteur
Einen Trenntrafo verwenden
Utilizar un transformador aislador de red
Utilizzare un trasformatore per isolarvi dalla rete

Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden
Componenti di sicurezza
Per la riparazione utilizzare solo componenti originali
Utilice solo piezas originales
Pieza de seguridad

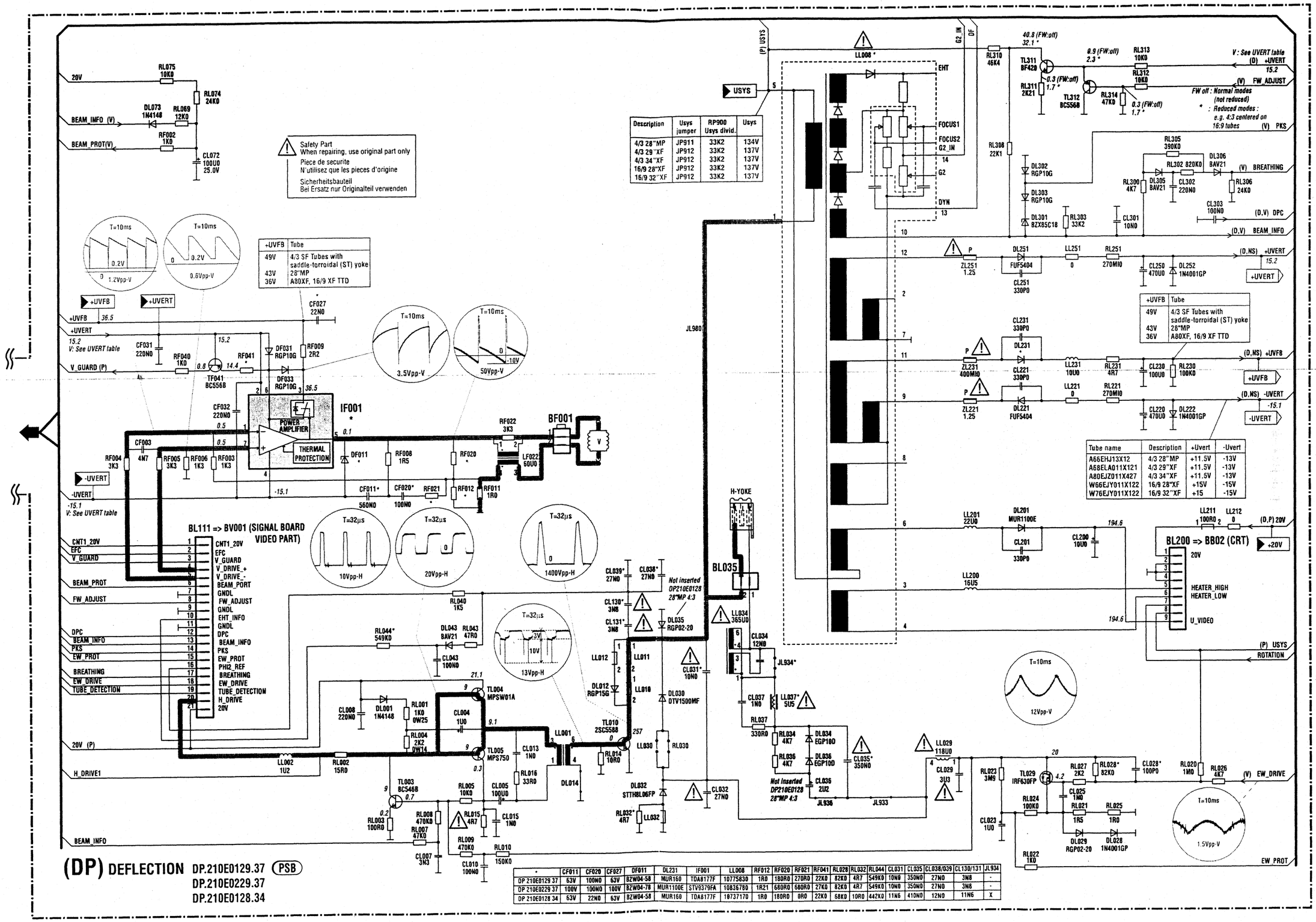
(PP) POWER SUPPLY
(PSB) PP 210E000
PP 210E001
PP 210E002

COMPLETE PCB DIAGRAM - SCHEMA PLATINE PRINCIPALE EQUIPEE - SCHALTUNG LEITERPLATTE KPL - SCHEMA PIASTRA COMPLETA - ESQUEMA PLATINA EQUIPADA
SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE - DP 210E0228 (28" XF 16:9 TTD TUBES / Gen 2) - DP 210E0232.37 (32" XF 16:9 TUBES / Gen 2)



·	CL006	CL032	CL033	CL035	CL130/131	RF011/012	RF020	RL044	RL301	RL305	RL308	LL029	LL037
DP 210E0228 37	-	27N0	510N0	510N0	2N0	1R21	180R0	280K0	-	560K0	18K7	118U0	5U5
DP 210E0232 37	X	47N0	680N0	560N0	2N6	1R82	680R0	374K0	2M2	680K0	17K4	73U0	4U2

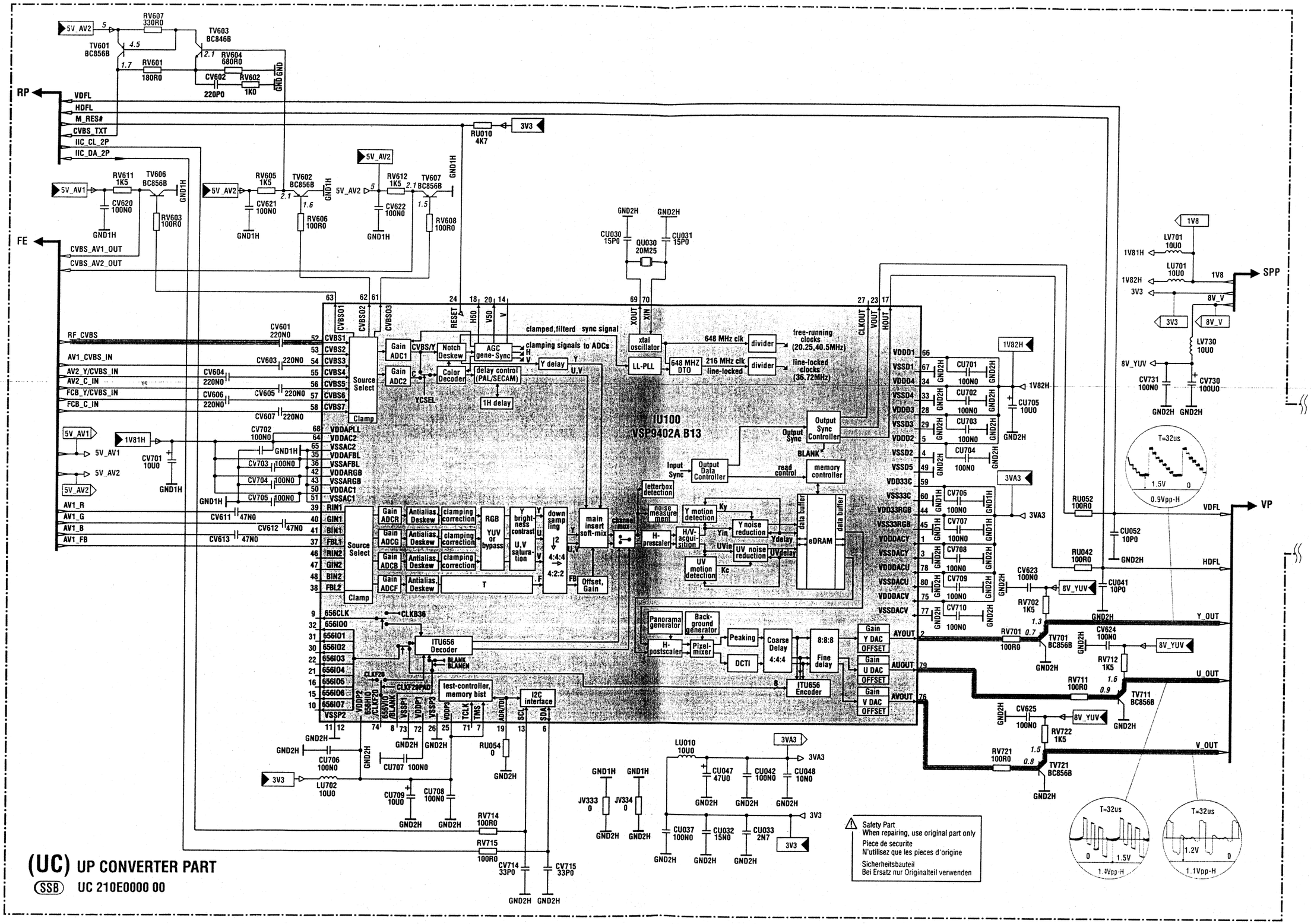
COMPLETE PCB DIAGRAM - SCHEMA PLATINE PRINCIPALE EQUIPEE - SCHALTUNG LEITERPLATTE KPL - SCHEMA PIASTRA COMPLETA - ESQUEMA PLATINA EQUIPADA
SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE -
DP 210E0129 (29" XF 4:3 TUBES / Gen 2) - DP 210E0229 (29" XF 4:3 TUBES / Gen 2A) - DP 210E0128 (28"MP 4:3)



	CF011	CF020	CF027	DF011	DL231	IF001	LL008	RF012	RF020	RF021	RF041	RL028	RL032	RL044	CL031	CL035	CL038/039	CL130/131	JL934
DP 210E0129 37	63V	100N0	63V	BZW04-58	MUR160	TDA8177F	10775630	1R0	180R0	270R0	22K0	82K0	4R7	549K0	10N0	350N0	27N0	3N8	-
DP 210E0229 37	100V	100N0	100V	BZW04-78	MUR1100E	STV9379FA	10836780	1R21	680R0	680R0	27K0	82K0	4R7	549K0	10N0	350N0	27N0	3N8	-
DP 210E0128 34	63V	22N0	63V	BZW04-58	MUR160	TDA8177F	10737170	1R0	180R0	0R0	22K0	68K0	10R0	442K0	11N5	410N0	12N0	11N6	X

(DP) DEFLECTION DP.210E0129.37 (PSB)
DP.210E0229.37
DP.210E0128.34

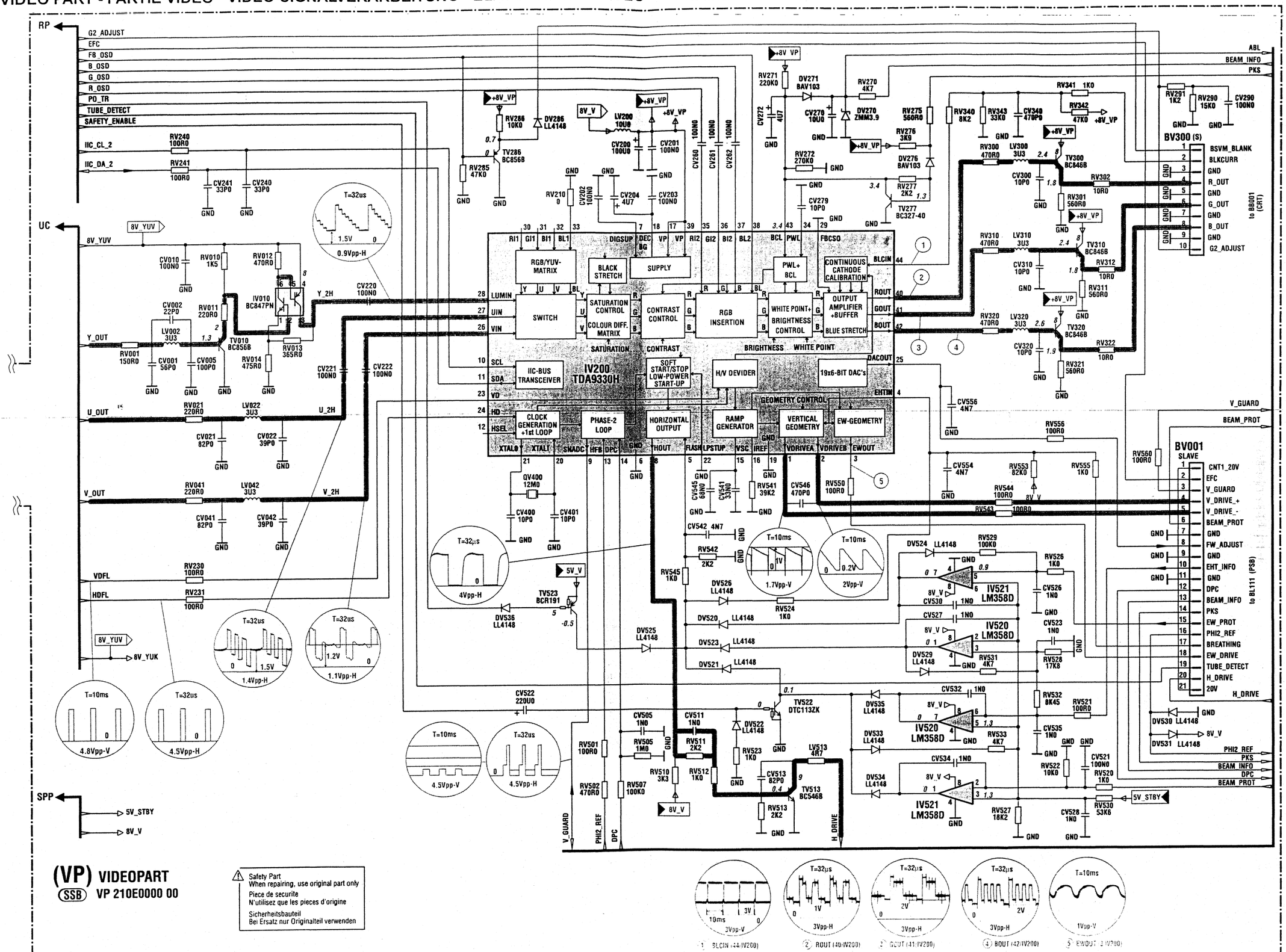
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
UPCONVERTER PART - PARTIE CONVERSION - UPCONVERTER STUFEN - CIRCUITO UPCONVERTER - SUPRACONVERSOR



(UC) UP CONVERTER PART

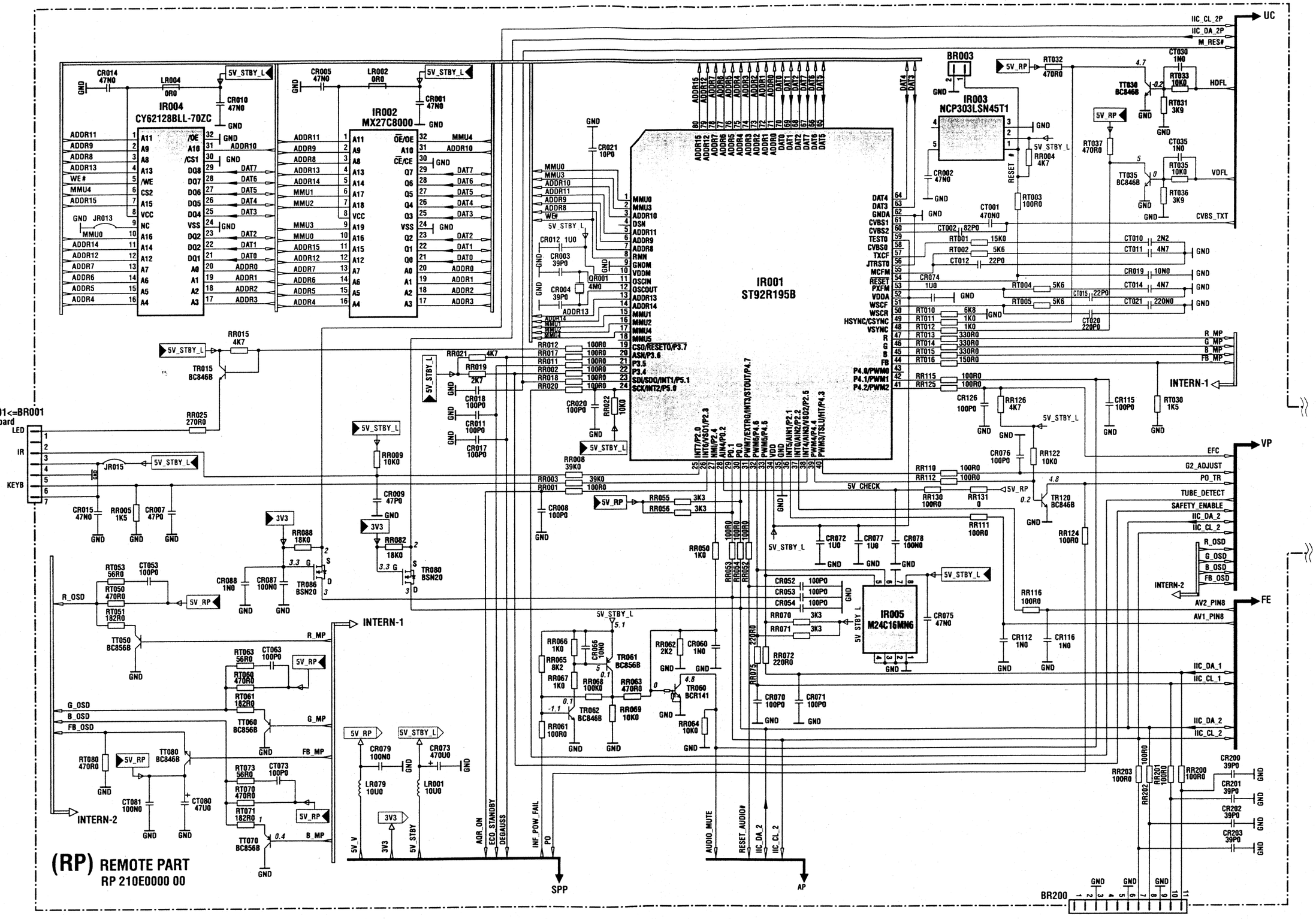
(SSB) **UC 210E0000 00**

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
VIDEO PART - PARTIE VIDEO - VIDEO-SIGNALVERARBEITUNG - ELABORAZIONE VIDEO - TRATAMENTO VIDEO



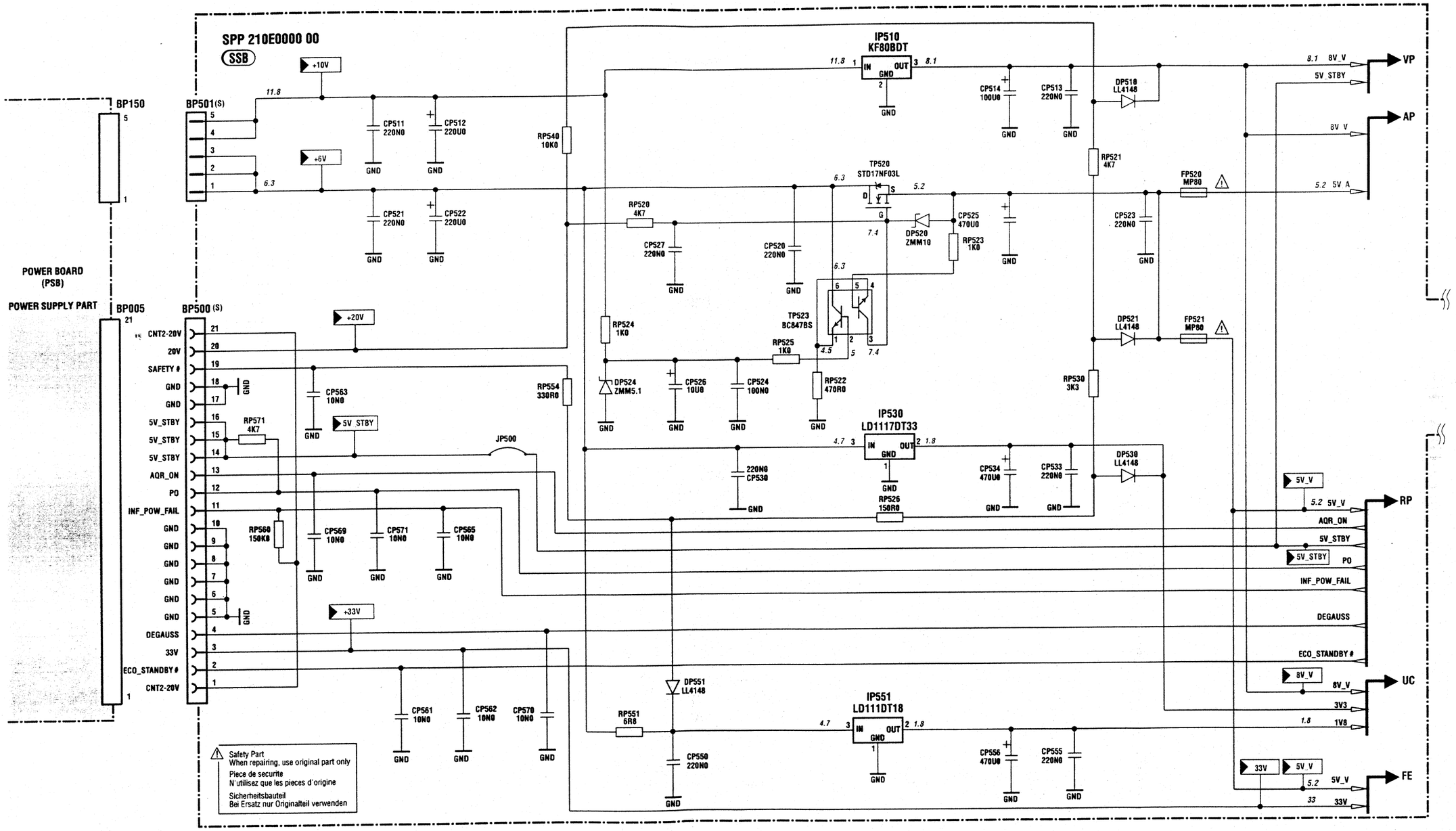
ETC210
First issue 07 / 03

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
REMOTE / MICROCONTROLLER - GESTION / MICROCONTROLEUR - FERNBEDIENUNGS- UND MICROCONTROLLERSTUFEN - MICROPROCESSORE - REMOTO / MICROCONTROLADOR

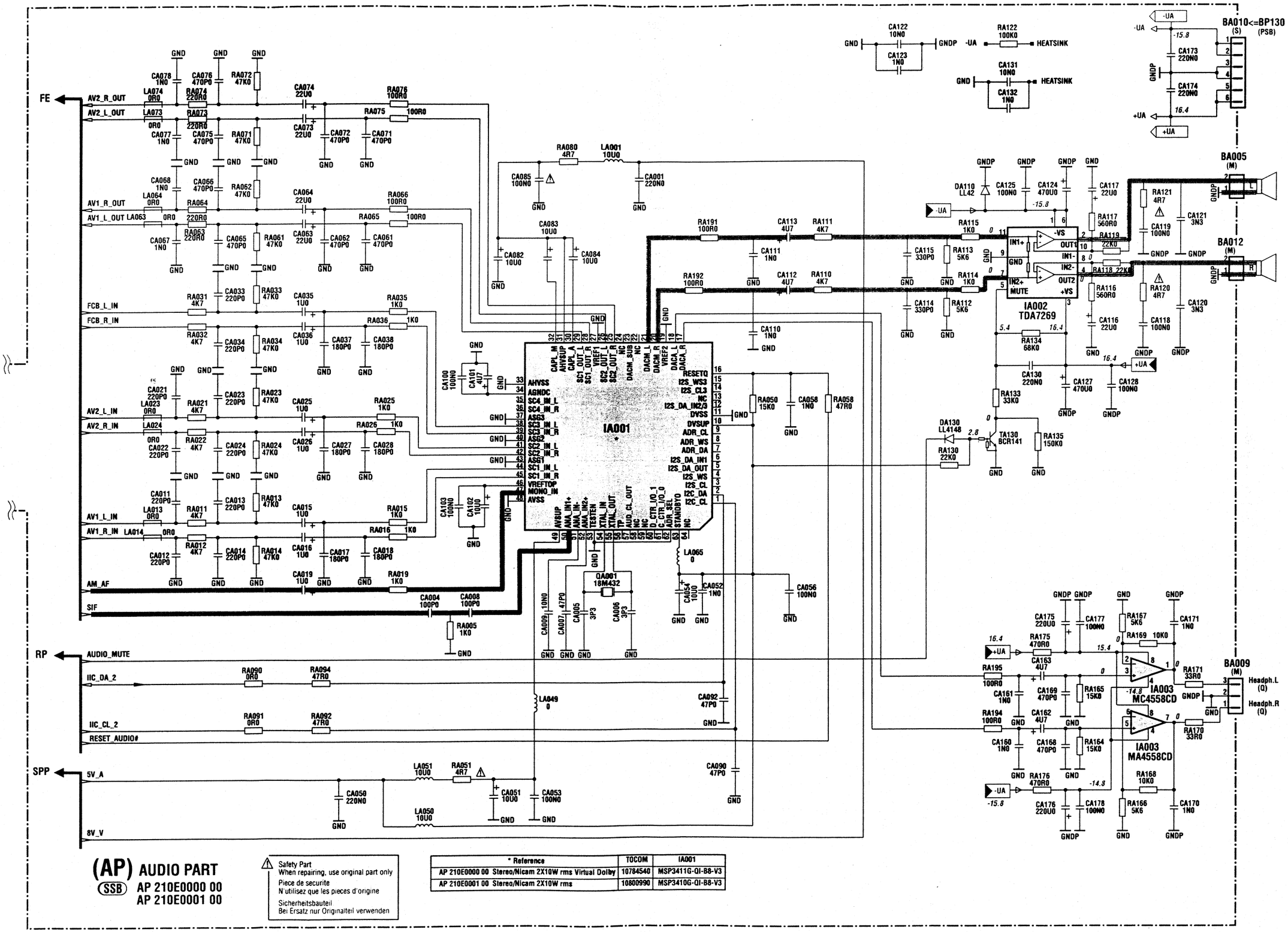


ETC210
First issue 07 / 03

SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
SIGNAL BOARD POWER PART - PARTIE ALIMENTATION DE LA PLATINE PETITES SIGNAUX - BETRIEBSSPANNUNGSERZEUGUNG SIGNAL PLATINE -
PARTE ALIMENTAZIOEN PIASTRA SEGNALI - PARTE ALIMENTACIÓN PLACA SEÑAL



SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
AUDIO PART - PARTIE AUDIO - AUDIOSTUFEN - CIRCUITO AUDIO - AUDIO

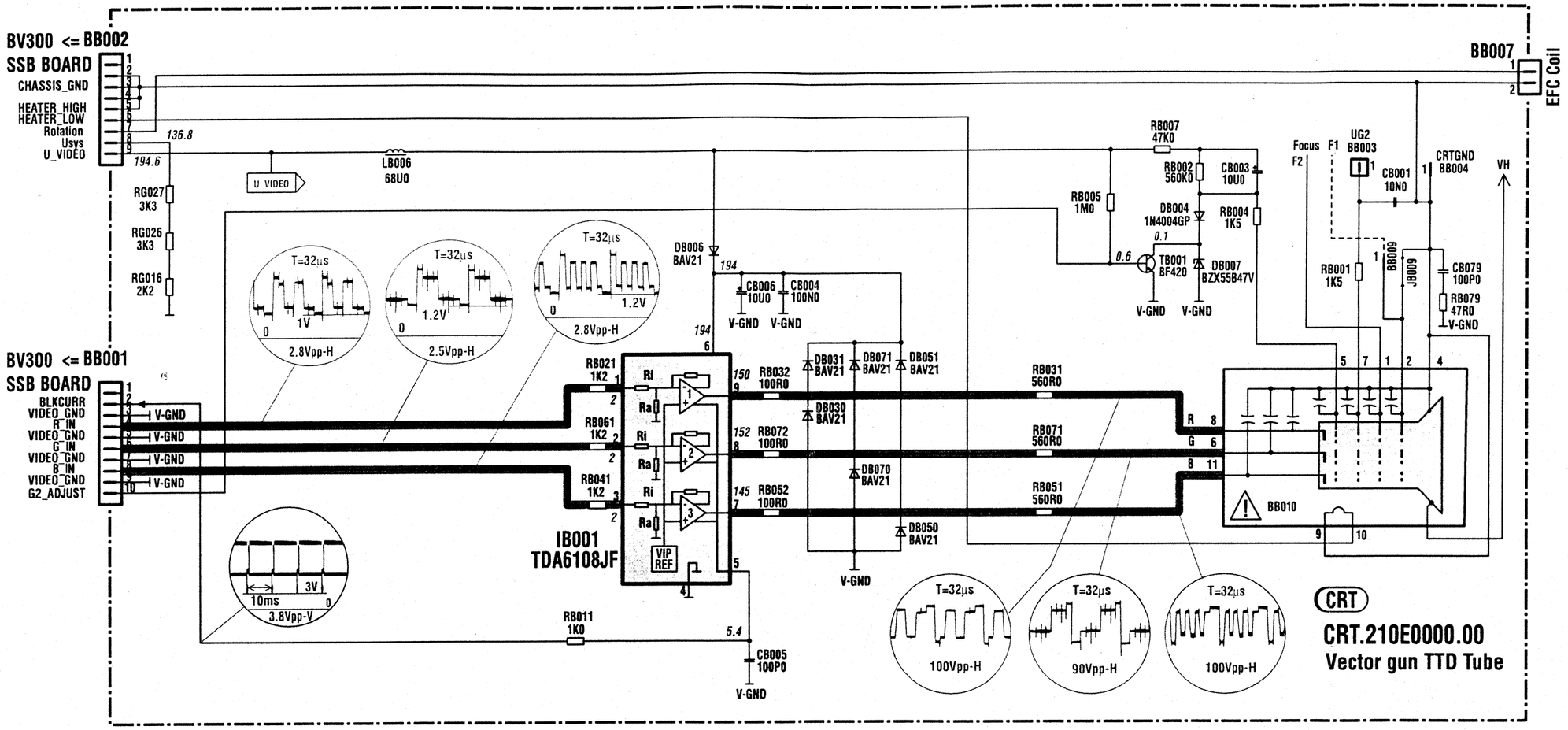


(AP) AUDIO PART
SSB
AP 210E0000 00
AP 210E0001 00

⚠ Safety Part
When repairing, use original part only
Piece de securite
N'utilisez que les pieces d'origine
Sicherheitsbauteil
Bei Ersatz nur Originalteil verwenden

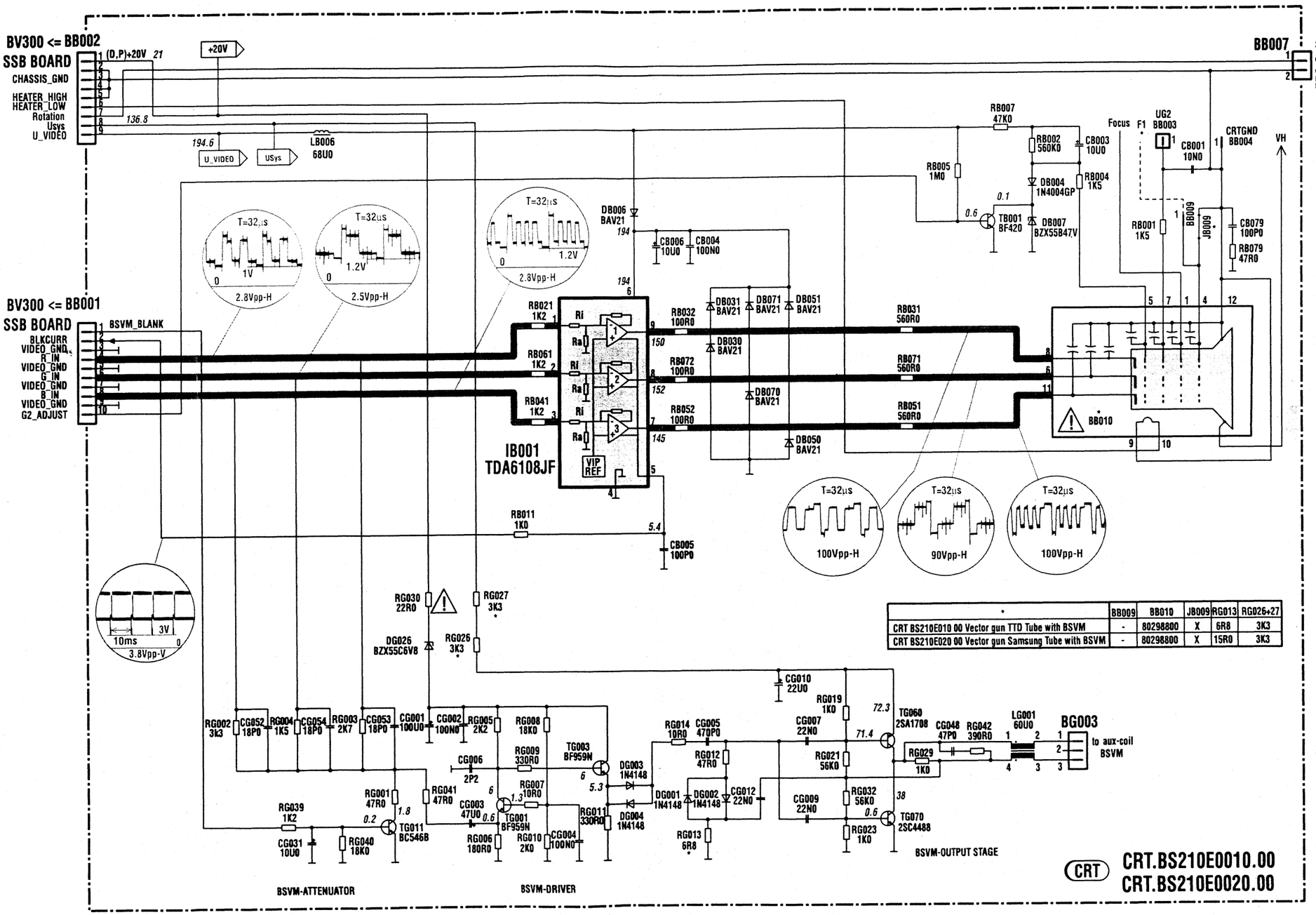
* Reference	TOCOM	IA001
AP 210E0000 00 Stereo/Nicam 2X10W rms Virtual Dolby	10784540	MSP3411G-QI-B8-V3
AP 210E0001 00 Stereo/Nicam 2X10W rms	10800990	MSP3410G-QI-B8-V3

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO
CRT.210E0000.00



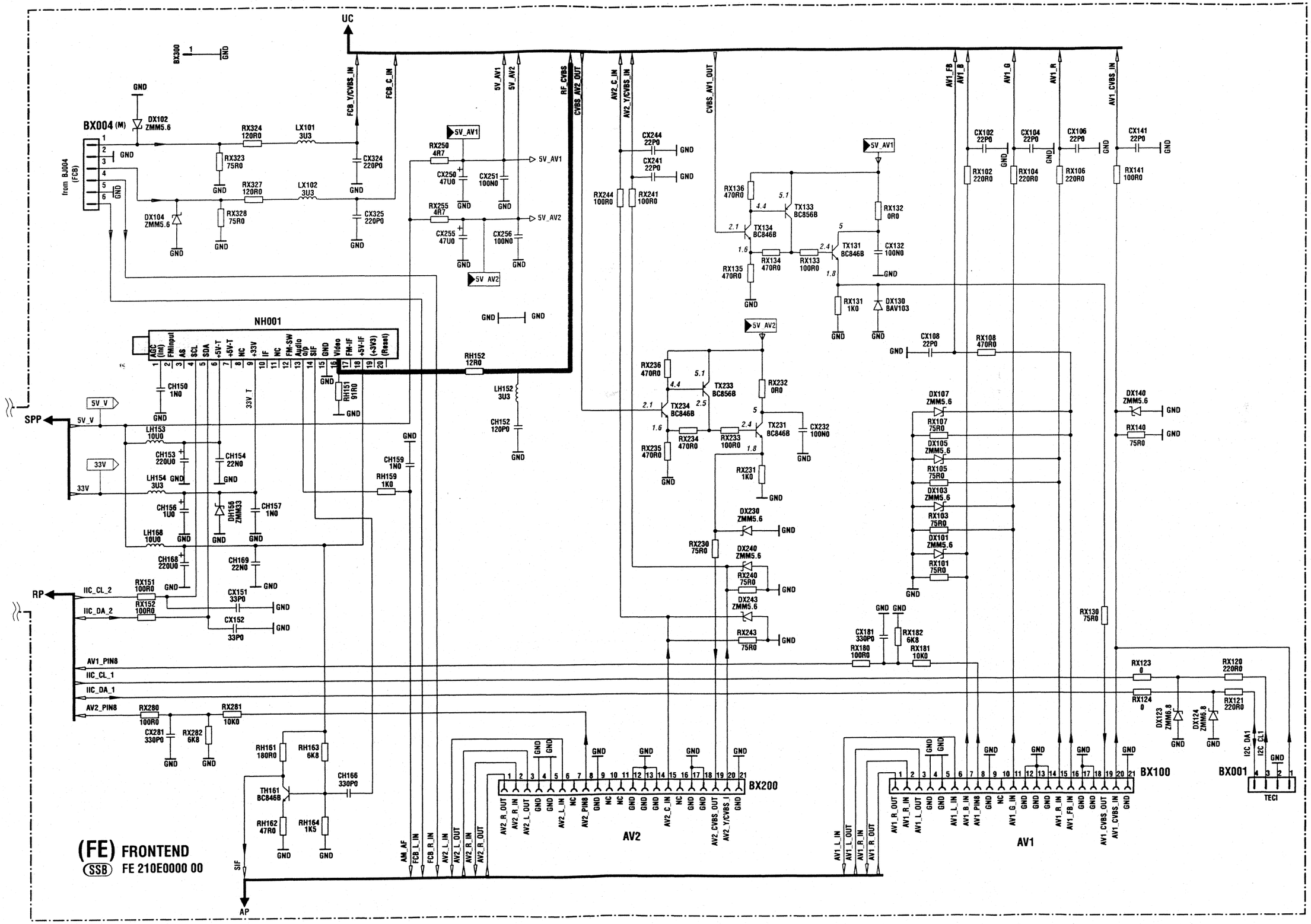
VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

CRT.BS210E0010.00 - CRT.BS210E0020.00



*	BB009	BB010	JB009	RG013	RG026+27
CRT BS210E010 00 Vector gun TTD Tube with BSVM	-	80298800	X	6R8	3K3
CRT BS210E020 00 Vector gun Samsung Tube with BSVM	-	80298800	X	15R0	3K3

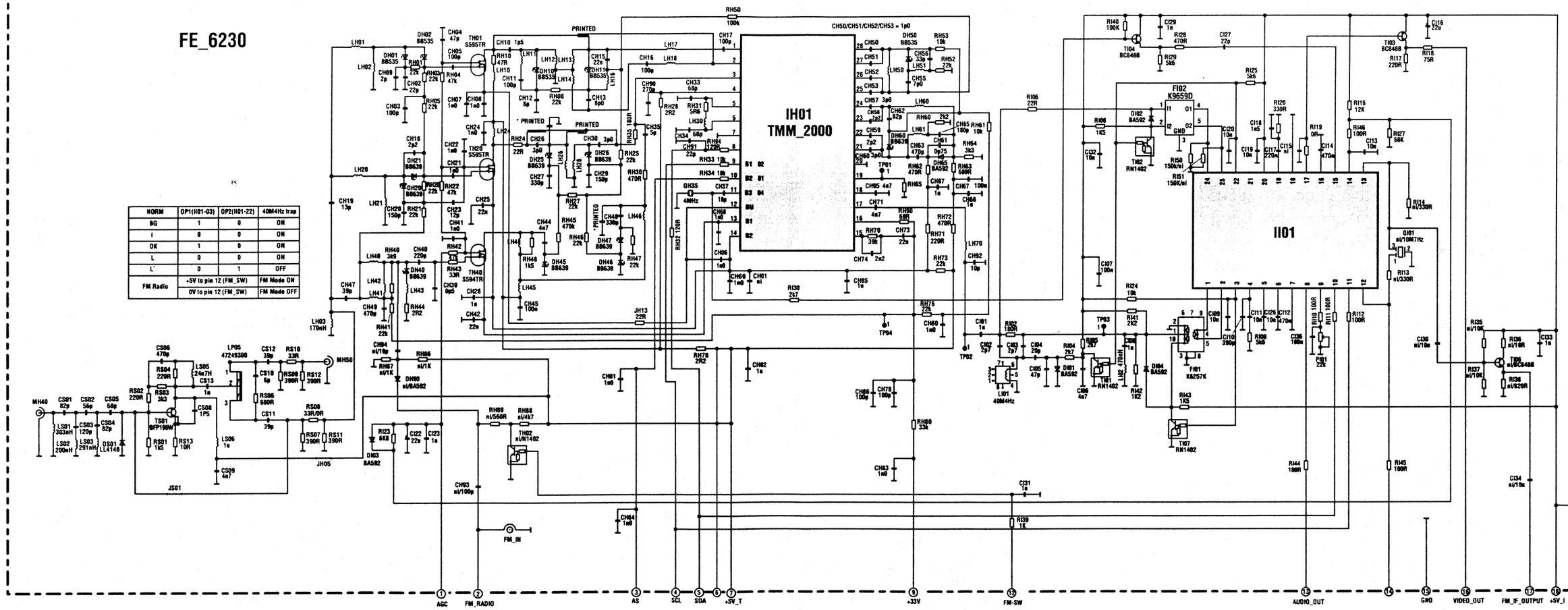
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL
FRONTEND PART - PARTIE SIGNAUX D'ENTREE - EINGANGSSTUFEN - PRESE FRONTALI - FRONT END PART



VHF / UHF TUNER FE6230 (For information only)

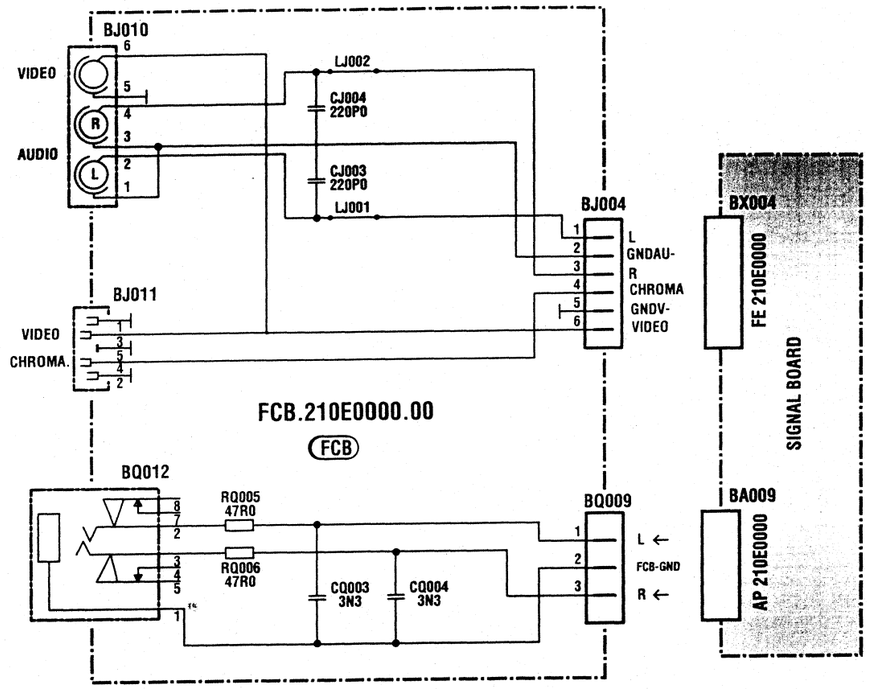
FE_6230

NORM	OP1(IH01-03)	OP2(IH01-22)	40M4Hz trap
BG	1	0	ON
I	0	0	ON
DK	1	0	ON
L	0	0	ON
L'	0	1	OFF
FM Radio	+5V to pin 12 (FM_SW)		FM Mode ON
	0V to pin 12 (FM_SW)		FM Mode OFF

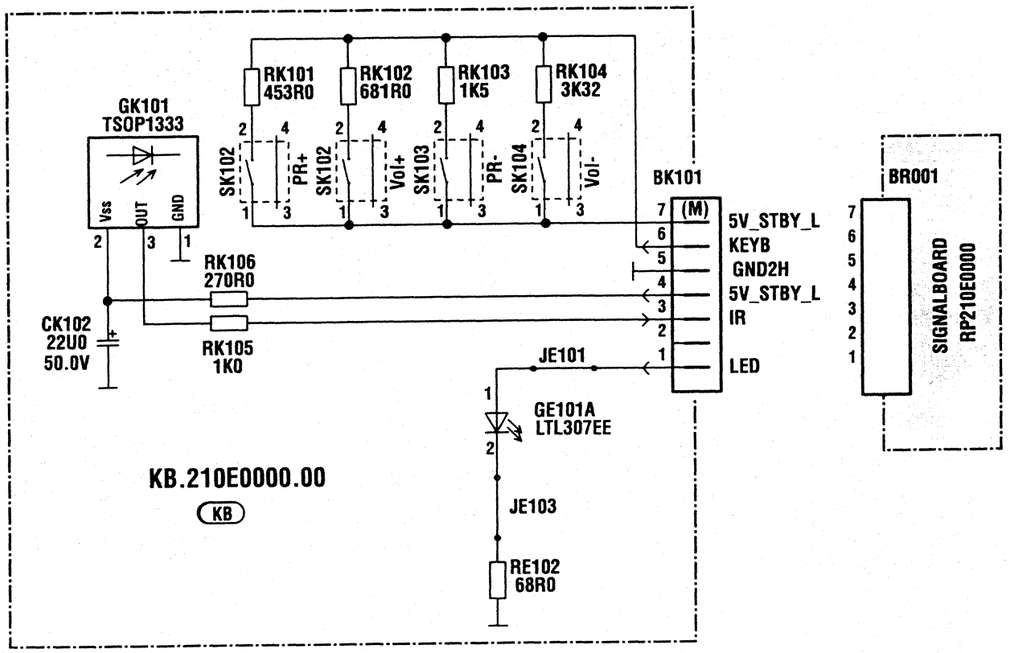


FRONT CONNECTOR BOARD - PRISES EN FACADE ET INTERCONNEXION DU CLAVIER -FRONT ANSCHLUSSPLATTE - PIASTRA CONNESSIONE FRONTALE - PLATINA MANDOS FRONTAL

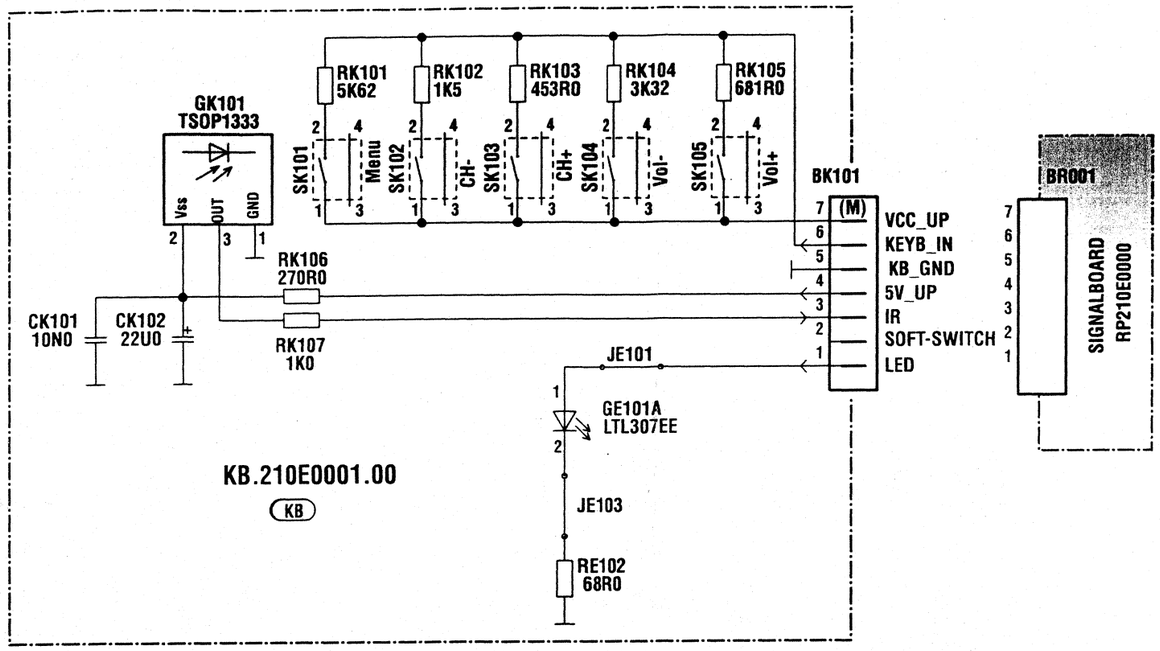
FCB.210E0000



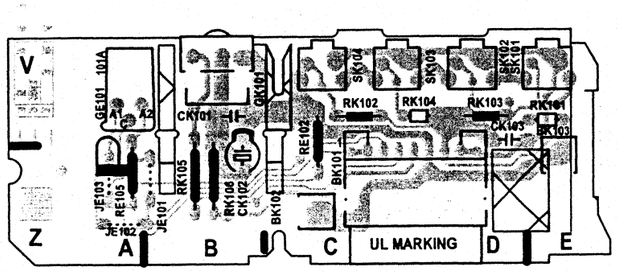
KB.210E0000 - KEYBOARD 4 Key

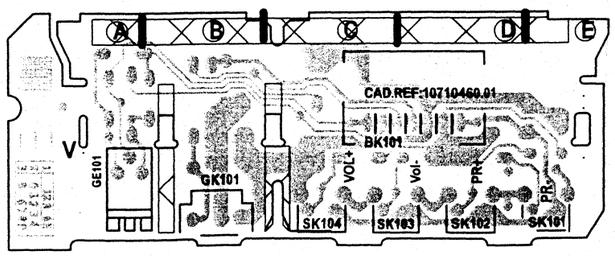


KB.210E0000.00 - KEYBOARD 5 Key

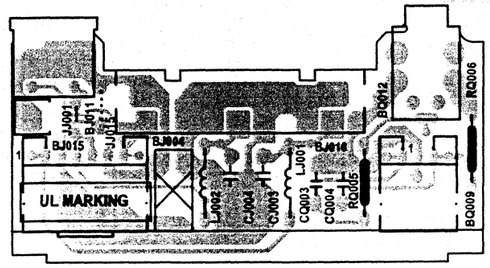


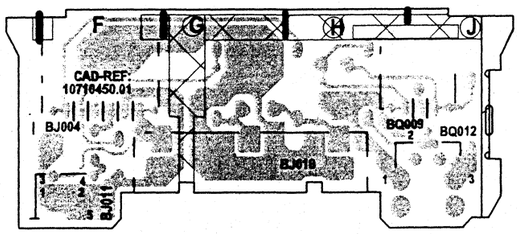
KB.210E000





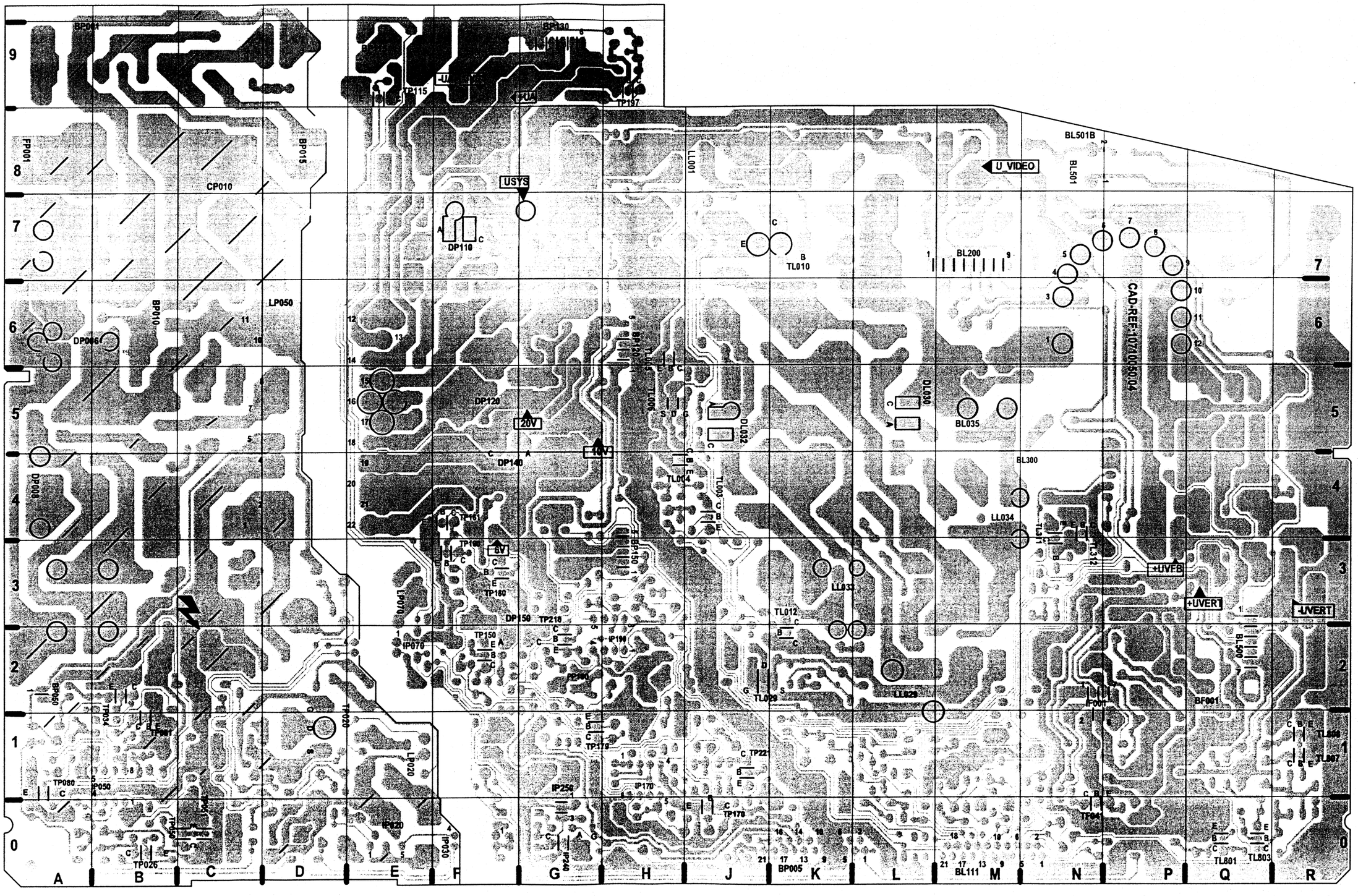
FCB.210E000





POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

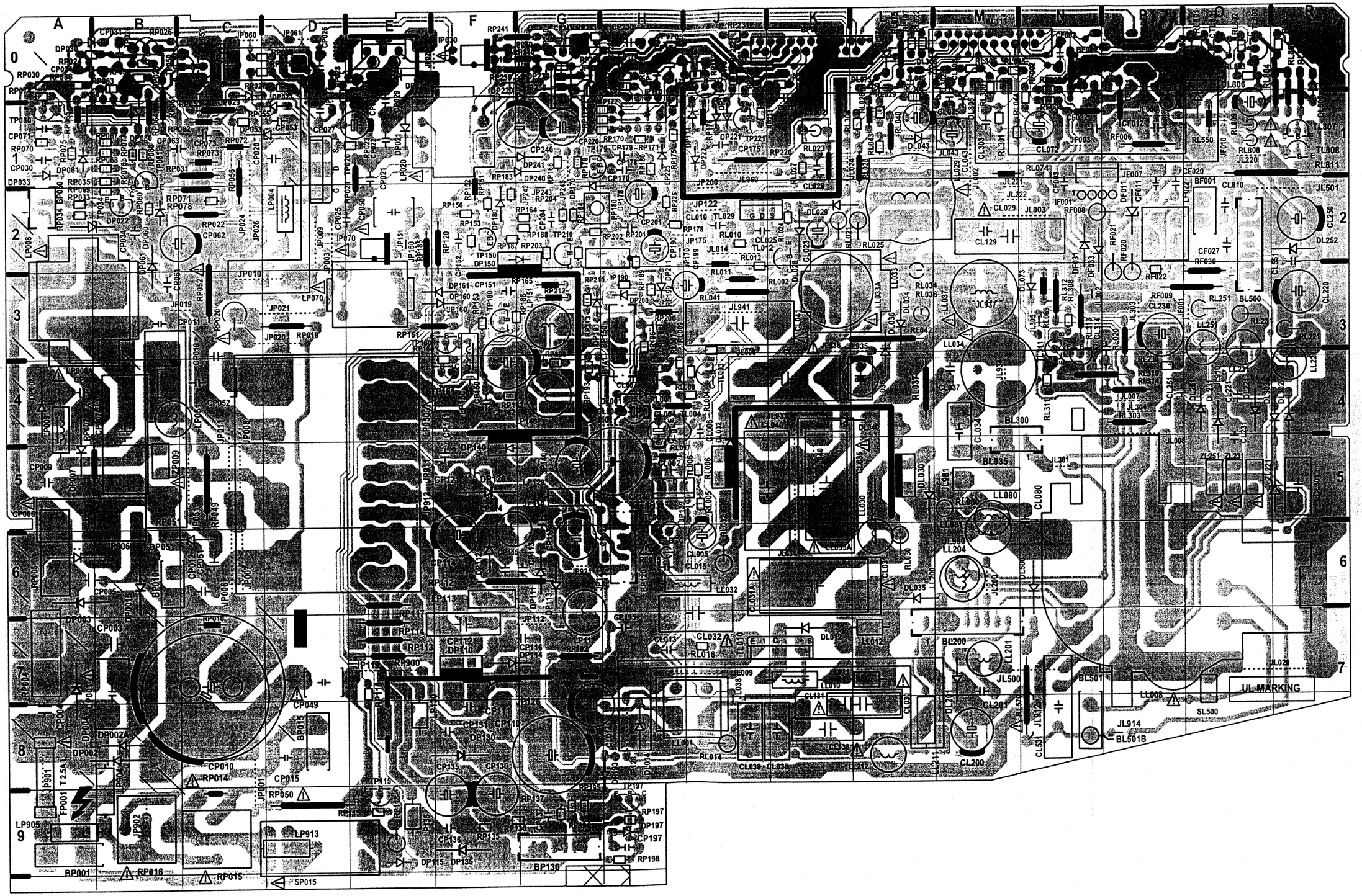
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



ETC210
First issue 07 / 03

POWER / SCAN BOARD - PLATINE ALIMENTATION / BALAYAGE - NETZTEIL- UND ABLENKPLATINE - PIASTRA DEFLESSIONE / ALIMENTAZIONE - PLACA ALIMENTACIÓN / BARRIDOS

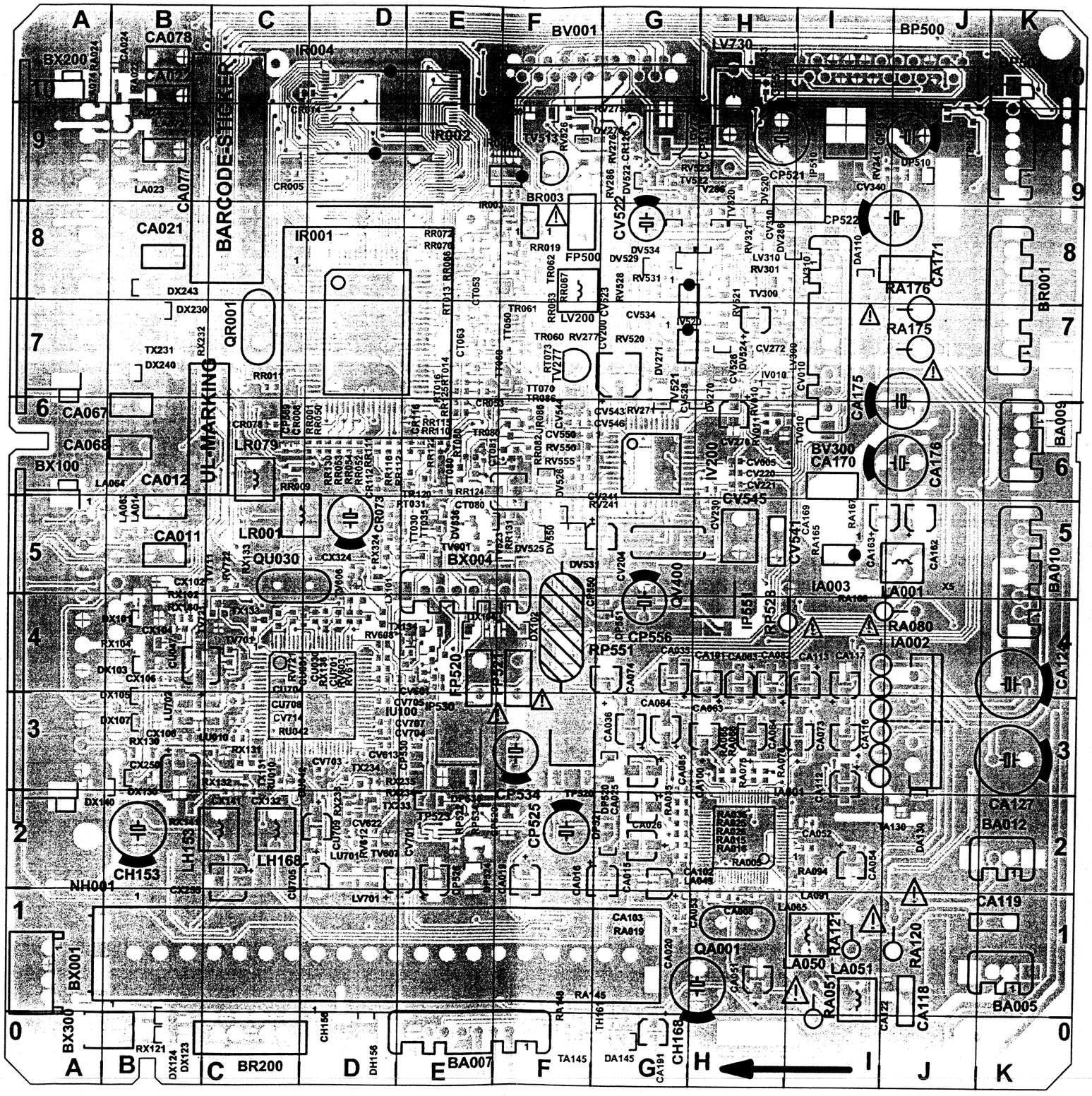
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



ETC210
First issue 07 / 03

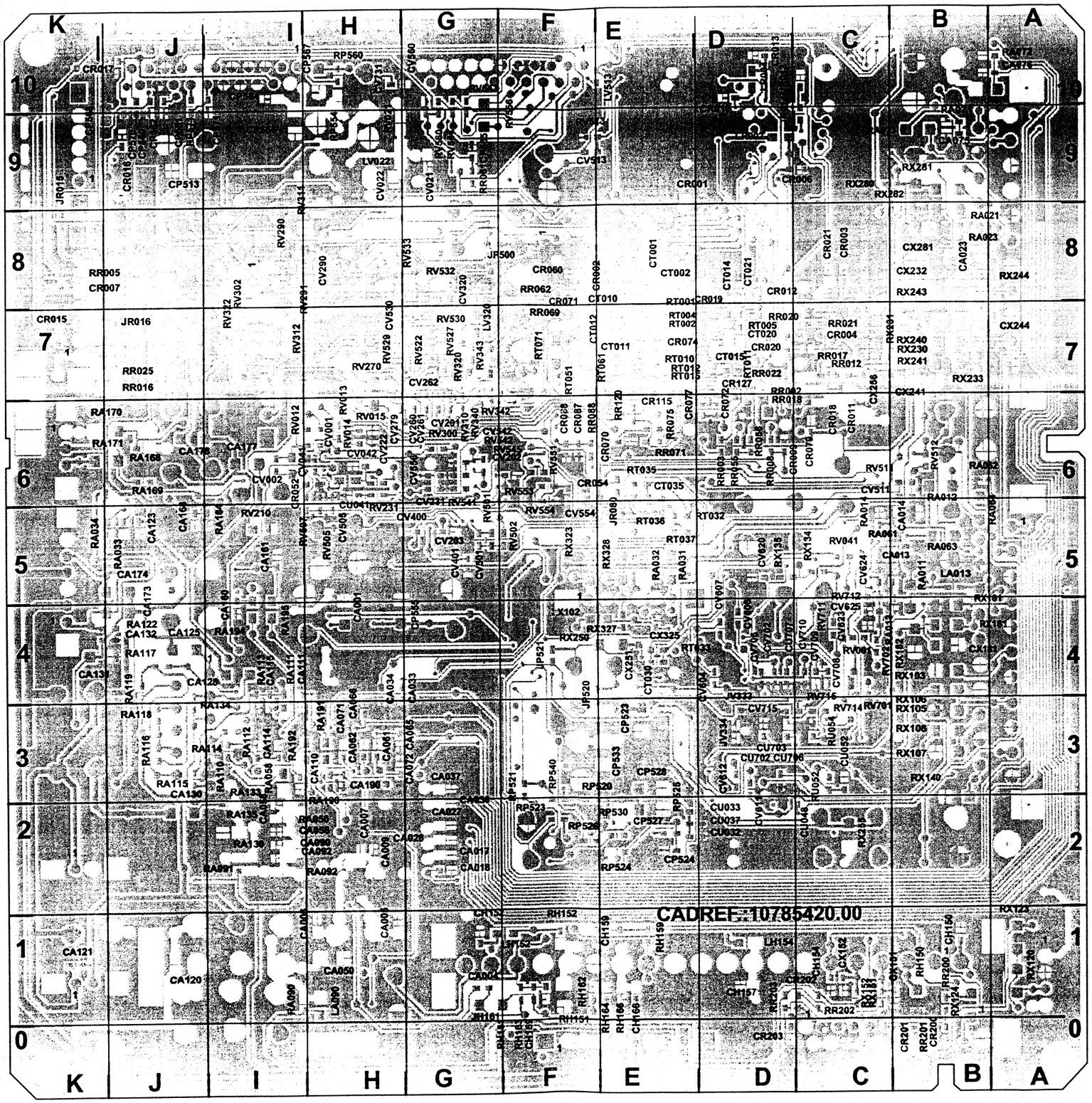
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



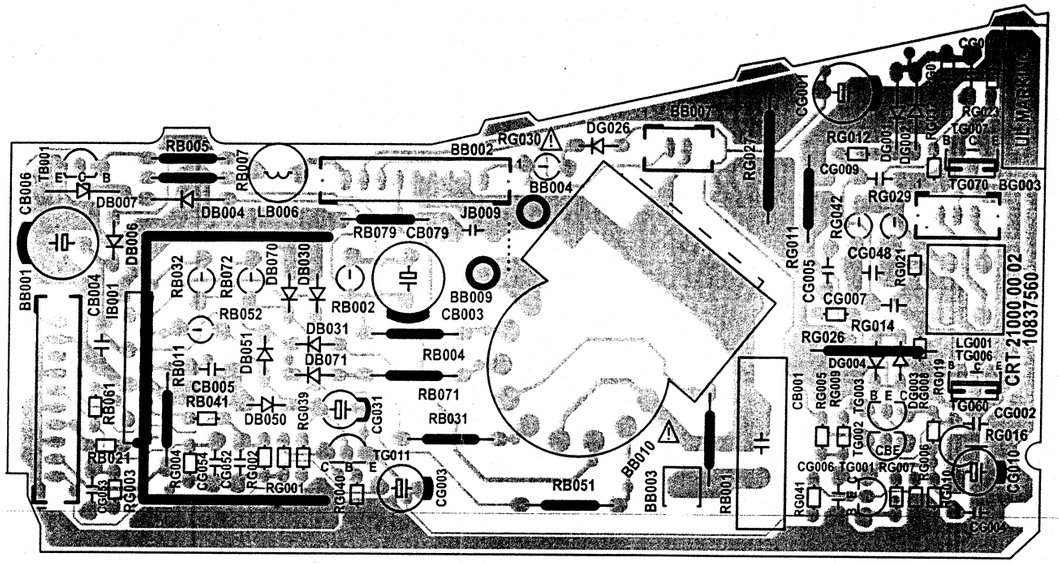
SMALL SIGNAL BOARD - PLATINE PETITS SIGNAUX - SIGNAL-PLATINE - PIASTRA PICCOLI SEGNALI - PLACA PEQUEÑA SEÑAL

SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS

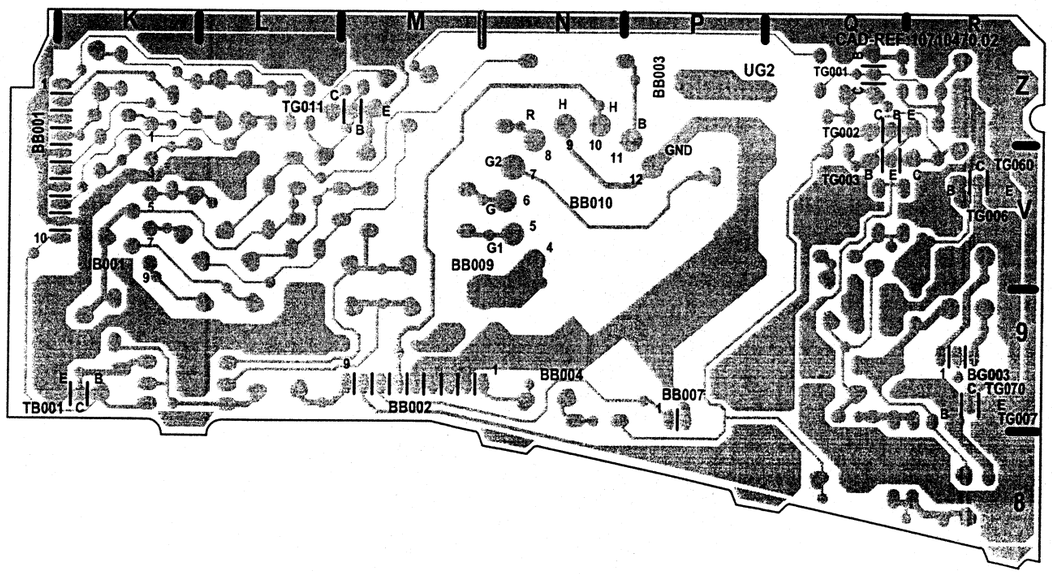


VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES

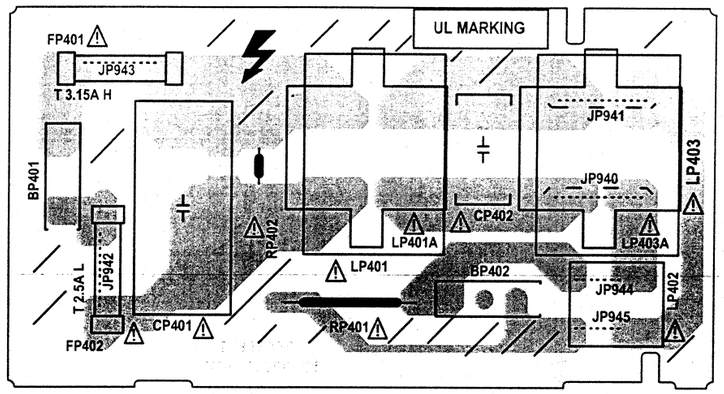


SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS

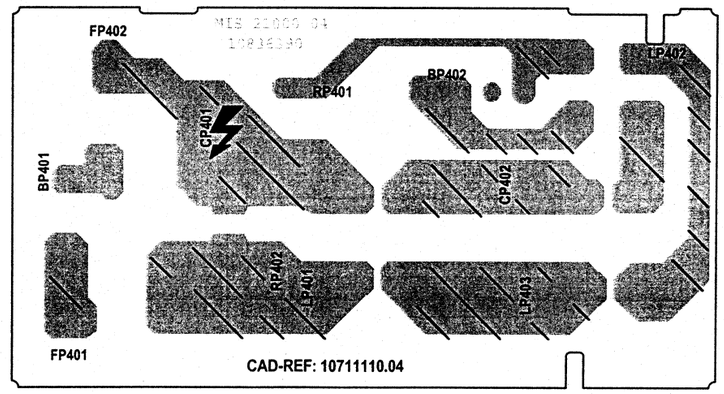


MAINS FILTER - FILTRE SECTEUR MIS210E0000

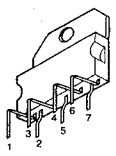
COMPONENT SIDE - COTE COMPOSANTS - BESTÜCKUNGSSEITE - LATO COMPONENTI - LADO COMPONENTES



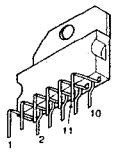
SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE - CIRCUITS INTEGRES ET TRANSISTORS INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN - CIRCUITI INTEGRATI TRANSISTOR - CIRCUITOS INTEGRADOS Y TRANSISTORES



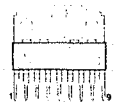
TDA 8177F



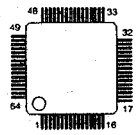
TDA7269

LM393
NJM2903D
VIPER20DIP

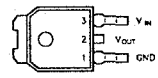
MC4558CD
LM358D
TL431ACLP
M24C16MN6



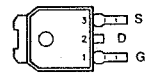
TDA6108JF



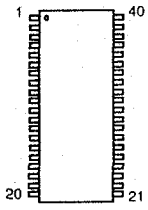
MSP3410G



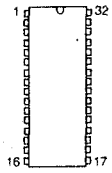
LF85CDT
KF80BDT
LD1117DT33
LD1117DT18



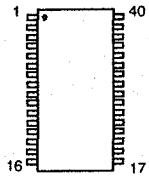
STD17NF03L



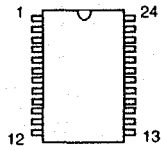
SAA4956TJ



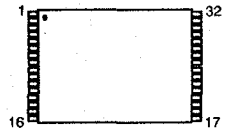
CXK581000AM-70LL



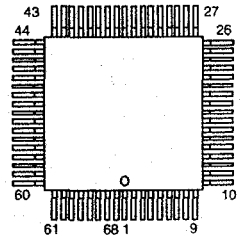
MX27C4000MC-90



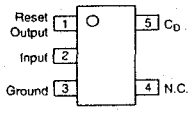
TDA9178



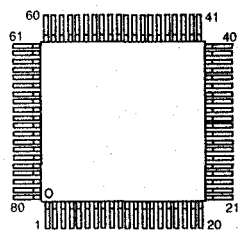
OTP THOMSON :
M27C801



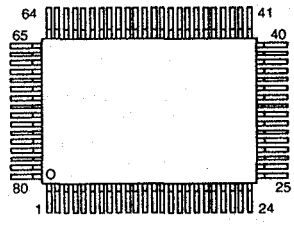
DMU0 CUT 2.1



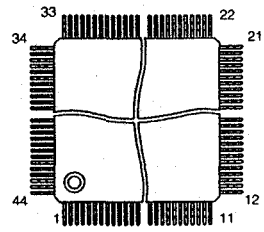
NCP303LSN45T1



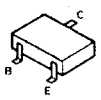
VSP9402A-B13



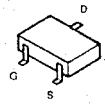
ST92R195B/JAM



TDA9330



BC846-BC846B
BC 847B-BC856B
BC857B-BF 799
BC 848 A/B/C
BCR141-BCR141N
BCR191
BF660
DTC113ZK

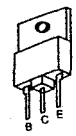


BSN20

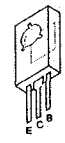
BF420
BF 422

BC327
BC 337
BC546B
BC 548B
BC556B
BC 558B
BF959

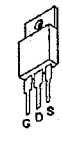
MPS750P
MPSW01A



ON4977N
2SC5588



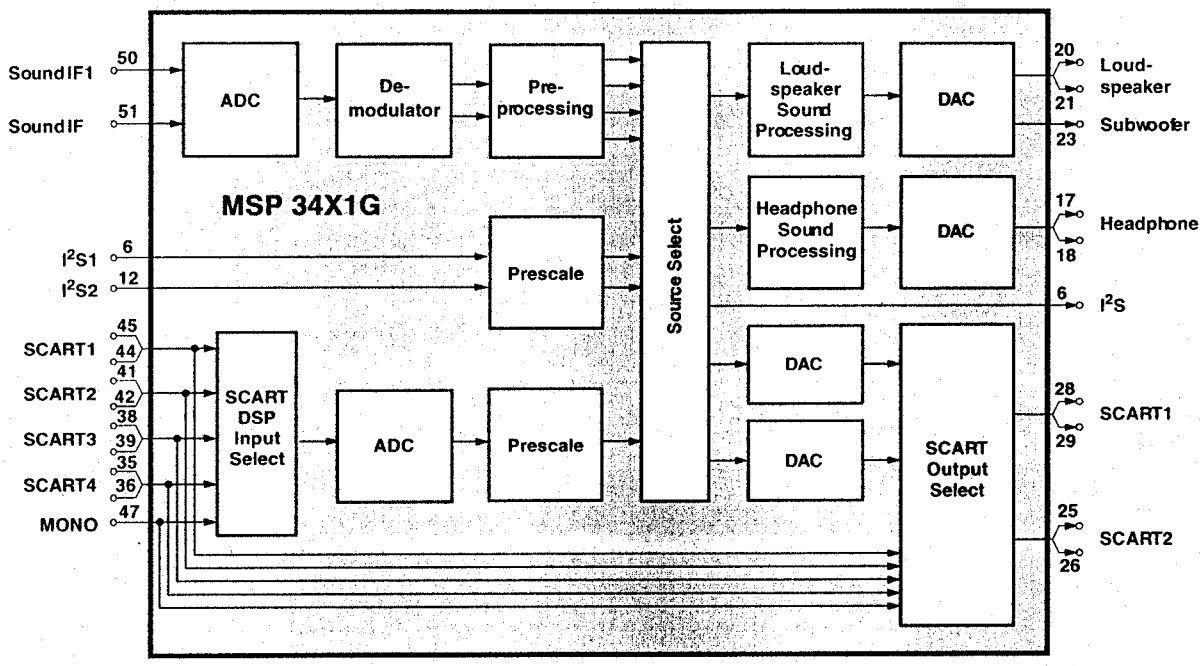
BD139
BD140



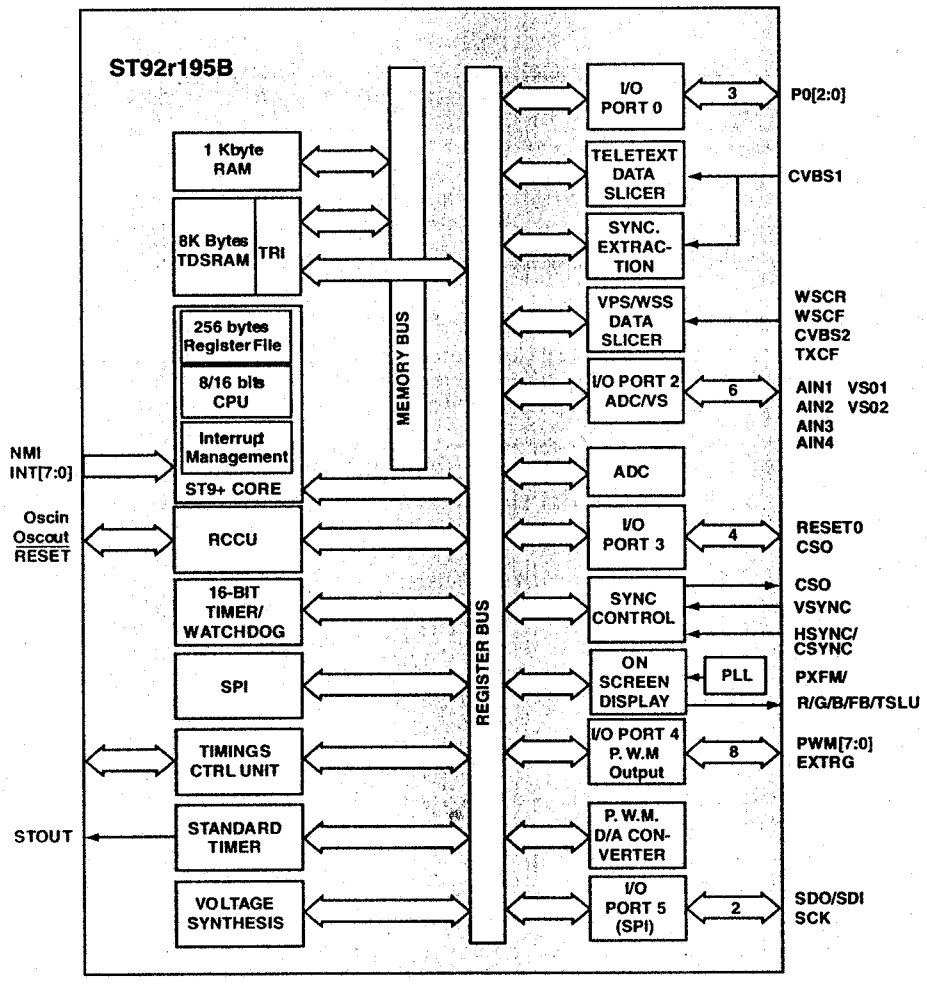
STH13NB60FI
SPW17N80C2
IRF630FP

INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER - SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

IA001- MSP34X0 / X1G



IR001- ST92R195B



LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS - ABKÜRZUNGEN
LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **AQR_ON** DISABLE AQUISITION MODE REGUL. ENABLE PWM PULSE
- **AUDIO_MUTE** MUTES AUDIO AMPLFIERS
- **AV1_8** PIN_8 DETECTOR
- **AV_LINK** AV_LINK DATAS VCR/TV
- **AV_R_ OUT** AUDIO RIGHT-OUT
- **AV_L_ OUT** AUDIO LEFT-OUT
- **AV_R_ IN** AUDIO RIGHT-IN
- **AV_L_ IN** AUDIO LEFT-IN
- **AV_B** BLUE SIGNAL FROM AV
- **AV_G** GREEN SIGNAL FROM AV
- **AV_R** RED SIGNAL FROM AV
- **AV_C_ IN** CHROMA-IN
- **AV_FB** FAST BLANK SIGNAL FROM AV SCART
- **AV_Y_ IN** VIDEO-IN
- **BEAM_INFO** BEAM CURRENT INFORMATION
- **BLKCURR** CUT OFF CURRENT
- **B_TXT** BLUE SIGNAL OUTPUT (TEXT)
- **B_OUT** BLUE SIGNAL TO VIDEO AMPLIFIER
- **BREATHING** COMPENSATE BREATHING PICTURE SIGNAL
- **BSVM** BEAM SCAN VELOCITY MODULATION
- **CNT1_20V** SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BV001- BL111)
- **CNT2_20V** SAFETY SIGNAL TO INSURE A GOOD CONNECTION BETWEEN SIGNAL BOARD AND POWER BOARD (BP500- BP005)
- **CRT** CATHODE RAY TUBE
- **CVBS** VIDEO
- **CVBS_TXT** TEXT VIDEO
- **DEGAUSS** DEGAUSS SIGNAL
- **DPC** DYNAMIC PHASE COMPENSATION SIGNAL
- **EFC** EARTH FIELD CORRECTION
- **EHT** EXTREMELY HIGH TENSION
- **EHT INFO** HORIZONTAL DEFLECTION PROTECTION
- **E.W_DRIVE** EAST - WEST DRIVE SIGNAL
- **EW_PROT** SAFETY SIGNAL FROM DIODE MODULATOR
- **FB DETEC** FAST BLANKING DETECT
- **FB_TXT** FAST BLANKING (TEXT)
- **FW ADJ.** FULL WHITE ADJUSTMENT
- **G_OUT** GREEN SIGNAL TO VIDEO AMPLIFIER
- **G_TXT** GREEN SIGNAL OUTPUT (TEXT)
- **H_DRIVE** DRIVE SIGNAL FOR HORIZONTAL DEFLECTION
- **HEATER** HEATER OUTPUT FROM THE DST TO CRT
- **IIC-CL-1** I2C CLOCK BUS 1
- **IIC-CL-2** I2C CLOCK BUS 2
- **INF_POW_FAIL** POWER FAIL INFORMATION
- **IR** INFRARED RECEIVER
- **LED** LED DISPLAY
- **M_RES#** MAIN RESET SIGNAL
- **NMI** NON MASKABLE INTERRUPT
- **PHI2_REF** PHI2 REFERENCE SIGNAL
- **PKS** PEAK SENSING
- **PO** POWER ON
- **PWM** PULSE WIDTH MODULATION
- **RESET** RESET TO MICROPROCESSOR
- **RF_CVBS** DEMODULATED TERRESTRIAL TUNER SIGNAL
- **ROTATION** OUTPUT OF EARTH FIELD CORRECTION STAGE
- **R_OUT** RED SIGNAL TO VIDEO AMPLIFIER
- **R_TXT** RED SIGNAL OUTPUT (TEXT)
- **SIF** SOUND IF OUTPUT
- **SSC_V_GUARD** SAFETY DATA GENERATED BY THE VERTICAL AMPLIFIER TDA8177F
- **+USYS** SYSTEM VOLTAGE
- **+/- UA** SOUND VOLTAGE
- **+UVERT** POSITIVE SUPPLY VERTICAL VOLTAGE
- **-UVERT** NEGATIVE SUPPLY VERTICAL VOLTAGE
- **+UVFB** POSITIVE SUPPLY VOLTAGE FOR VERTICAL POWER STAGE
- **+UVIDEO** VIDEO VOLTAGE FOR THE CRT BOARD
- **U_OUT** U TO VIDEO PART
- **V_OUT** V TO VIDEO PART
- **V_DRIVE** VERTICAL DEFLECTION DRIVE SIGNAL
- **Y_OUT** Y TO VIDEO PART
- **+UVFB** POSITIVE SUPPLY VOLTAGE FOR VERTICAL POWER STAGE
- **1V8** SUPPLIES 1V81H / 1V82H POWER SUPPLY UP CONVERTER PART OF SIGNAL BOARD
- **3V3** 3V3 POWER SUPLY UP CONVERTER PART OF SIGNAL BOARD
- **5 V_A / 5V_V** 5V POWER SUPPLY SIGNAL BOARD
- **5V_STBYL / 5V_RP** MICROPROCESSOR SUPPLY VOLTAGE
- **5V_STBY** 5V STANDBY
- **6 V** SUPPLIES THE 5V REGULATION AND 3V3 AND 1V8 REGULATORS ON THE SIGNAL BOARD.
- **10 V** SUPPLIES THE 8V_V REGULATORS ON SIGNAL BOARD
- **8 V_V** 8V SUPPLY SIGNAL BOARD
- **7V_STBY** 7V STANDBY
- **33V** SUPPLY VOLTAGE TUNER
- **20V** SUPPLY VOLTAGE HORIZONTAL DRIVER AND BSVM CRT

THOMSON

29 DC 410 S

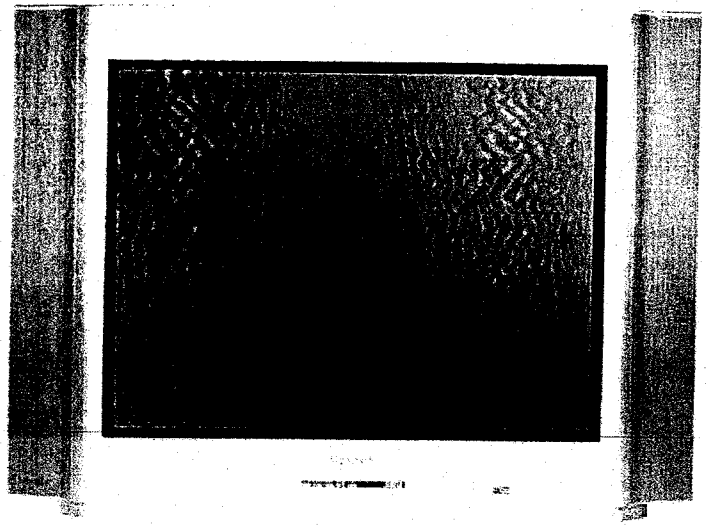
Technical Data :

BRAND	
Brand	THOMSON
PICTURE	
Screen size : diagonale (cm / inch)	72 / 29
Visible screen size : diagonale (cm / in	68 / 27
Category	4/3
Tube Type	Extra-Flat
Tube Mask	Invar
Frequency	100Hz High Focus
Picture Noise Reduction	Motion adaptive
Picture Contrast	PSI
Contrast optimisation	-
Format control	Yes
Zoom transition	-
16/9 autoformat (black bars cancelled)	-
Picture enhancement	-
Picture enhancement	BSVM
Zoom type	-
Zoom type (2)	-
Zoom type (3)	-
Multipicture	-
Picture presets	My picture / studio
Picture presets (2)	Film / sport / standard
Picture presets (3)	-
SOUND	
Sound type	Stereo Nicam
Music Power (Watt)	2 x 20
Loudspeakers built in (T/M/B)	0 / 2 / 0
Loudspeakers surround (T/M/B)	-
Dolby system	Virtual Dolby Surround
Wireless surround channel	-
Special sound effects	Magic/spatial/pseud/Wide/AVL
Loud speaker technology	Digital Pure Sound
Sound presets details	My sound / music
Sound presets details (2)	Film / voice / flat / standard
Sound presets details (3)	-
Tone control	Graphic Equalizer
Vol control headphones	Linked
RECEPTION	
Reception Norm	Pan European (LL'/BG/I/DKK')
Video standard (PAL / SECAM)	Yes / Yes
Video standard NTSC	NTSC 3.58 / 4.43 (AV)
Video standard	Pal 60Hz (AV)
Program number	99 + 3
Tuner synthesis	PLL
USER CONVENIENCE	
Sleep / wake-up timer	Yes / Yes
Parental Feature	Child Lock
Program auto switch off	Yes
On screen menu	Navilight
Menu languages	F/DA/GB/E/S/NL/P/DK/N/PL/H
Menu languages (2)	RU/CZ
Number of buttons on TV	4
Installation	AI+ (Auto-naming + auto sorting)
Remote Control	TV - VCR - DVD
Wireless keyboard (for TAK)	-
Hotel mode	-
Remote control ref	RC311TA1
SERVICES	
TV Guide	Program Info
Easy video recording	-
Teletext type	1.5 / Fastext / TOP
Pages for teletext	128
TAK	-
REAR CONNECTORS	
Antenna	1
Scart 1	CVBS / RGB
Scart 2	CVBS / S-VIDEO
Scart 3	-
CINCH audio in / out	-
CINCH video in / out	-
S-video in / out	-
External Loudspeaker	-
Telephone socket for TAK	-
I-2-I mode	-
Hotel connectors	-
FRONT CONNECTORS	
CINCH in	2 audio / 1 video
S-video in	Yes
Headphone connector (mm)	3.5
DESIGN	
Color	Silver
Clip'on frame color	-
GENERAL DATA	
EAN code	3244480116203
Chassis	ETC210
Power supply	220 - 240 V +/- 10% / 50 Hz
Size (W x H x D) in mm	TBD
Packaging size (W x H x D) in mm	920 x 750 x 692
Weight : Net / Gross in kg	50.3 / 43.5
Instruction booklet languages (1)	D,F,I,GB,GR,DK,NL,S,E,P
Instruction booklet languages (2)	CZ,H,PL,RU,SK
Power consumption working / standby	130 Wh / 4 Wh
OPTIONAL ACCESSORIES	
Stand	STHA290
External loudspeakers	-

THOMSON

29 DC 410 S

29" XF 100Hz Virtual Dolby



FEATURES	BENEFITS
X-Flat Tube - TF Contour	For the best picture quality, incomparable comfort of vision and perfectly flat outlook
100Hz High Focus	A new dynamic 100 Hz for a high picture quality whatever the source is
Virtual Dolby Surround	Enjoy Cinema sound without additional speaker
Scarts x 2	Allows you to connect three devices at the same time (VCR, DVD,...)

Section :

Power supply

H_Deflection circuit

V_Deflection circuit

HF-IF circuit

Input / Output - Scart

Mechanical

Control panel

Data processing

Audio processing

Video processing

Picture Tube - Display

General